

ENVIRONMENTAL ASSESSMENT

THE OQUAWKA REACH: LOCK 18 UPPER, FURNAL ISLAND, and OQUAWKA DREDGE CUTS UPPER MISSISSIPPI RIVER MILES 411.0-415.2



**US Army Corps
of Engineers** ®
Rock Island District

AUGUST 2002

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BACKGROUND INFORMATION

The District (U.S. Army Corps of Engineers, Rock Island District) is directed by Congress to maintain a 9-foot navigation channel on the UMR (Upper Mississippi River). The bottom sediments of the UMR are in a dynamic state, moving and rearranging as a result of natural fluvial processes. These sediments occasionally threaten navigation by causing the channel to become narrow and/or shallow at localized sites. Maintenance involves dredging of accumulated sediment to restore the channel to proper navigation dimensions.

The District's dredging program encompasses the planning, design, construction, operation, and maintenance of waterway projects to meet navigation needs. The District's responsibility includes developing and maintaining the Nation's waterways and harbors to meet emergency, national defense, and national interest requirements. Channel maintenance dredging is prioritized and scheduled based on soundings and hydrographic surveys performed throughout the navigation season and in response to emergency channel closures created by barge groundings.

This EA (Environmental Assessment) was prepared to address impacts associated with utilization of three new (non-historic) dredged material placement sites—Sites 3, 5, and 8—in compliance with NEPA (National Environmental Policy Act of 1969). A Section 404(b)(1) Evaluation (EA Appendix B) has been prepared, and Section 401 water quality certification would be obtained from both Iowa and Illinois to comply with the Clean Water Act prior to implementation of this project. Impacts of the actual dredging operation and the future use of historic placements sites have been addressed in the report entitled, *Operations and Maintenance, Upper Mississippi River, 9-Foot Navigation Channel, Final Environmental Impact Statement, (Pools 11 - 22)*, dated July 1974. This EA may be used in support of a base plan for a potential Henderson #3 Section 204 project. The purpose of the 204 program is to protect, restore, or create aquatic and wetland habitat in connection with dredging of a Federal navigation project. These sites may be used for the emergency placement of dredged material following the District's normal real estate procedures. This EA describes an interim strategy for dredged material placement that could be used until a long-term plan can be developed.

An OSIT (On-Site Inspection Team), which consists of personnel from both State and Federal agencies, performs a natural resources assessment of each dredging/placement operation. The OSIT reviews proposed sites on location and recommends areas that would minimize impacts to backwaters, wetlands, prime farmland, and other sensitive habitats. The OSIT participated in the development of this plan during an office and on-site meeting on October 29, 1999. The OSIT also holds a post-placement inspection of each year's dredged material placement sites. The OSIT serves in an advisory capacity and has no regulatory authority; however, OSIT concerns and opinions are integral to the District's decision making process. The District must notify the OSIT of any departures that it makes from the OSIT recommendations. Final authority on dredging projects rests with the District's DE (District Engineer).

I. AUTHORITY AND PURPOSE

The formal authorization for the U.S. Army Corps of Engineers to perform operation and maintenance activities on the UMR was given in the Rivers and Harbors Act of 1927; as modified by the Rivers and Harbors Acts of 1930, 1932, and 1935; and a Resolution of the House Committee on Flood Control of September 19, 1944. These Acts and Resolution authorize the construction, operation, and maintenance of the 9-foot navigation channel on the Mississippi River between the mouth of the Missouri River and St. Paul, Minnesota.

The purpose of the channel maintenance program is to maintain the commercial 9-foot navigation channel in such a manner as to avoid potential loss of life, personal injury, or property damage that may result from inadequate maintenance of the channel and subsequent groundings. The purpose of the project described in this EA is to find suitable placement sites for dredged material when considering operational feasibility, cost, and environmental sustainability. Long-term placement areas are needed to avert emergency dredging placement actions that may have high ecological and/or monetary costs. This report focuses on the Oquawka Reach because previously used placement sites in this portion of the river have been filled and future dredging predictions indicate new placement sites are required.

II. PROJECT LOCATION AND DESCRIPTION

The project area lies in the lower portion of Pool 18 of the Mississippi River, upstream of Burlington, Iowa, in Des Moines County and downstream of Oquawka, Illinois, in Henderson County (Figure EA-1). The project area consists of three non-historic sites—Sites 3, 5, and 8—located between RM (river mile) 412.1 and RM 414.4 (plate EA-1). Physical descriptions of these sites can be found in Table EA-1. The main channel areas associated with these placement sites are known as the Oquawka Reach: Lock 18 Upper, Furnal Island, and Oquawka dredge cuts (plate EA-1).

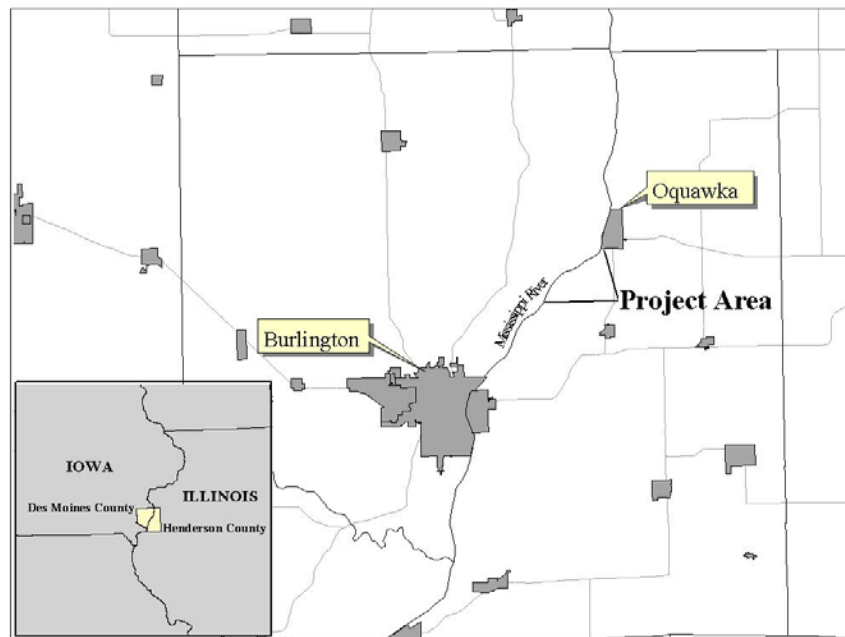


Figure EA-1. Location of project area

Table EA-1. Physical characteristics of dredged material placement sites

	Site 3	Site 5	Site 8
Length ¹	5,500 ft	755 ft	2,450 ft
Width ¹	90 ft	190 ft	Varies between 200-1,200 ft
Depth of material	12 ft	10 ft	10 ft
Terrestrial Encroachment	9.5 acres	1.5 acres	37 acres
Aquatic Encroachment	1.0 ac. wetland impacts	None	0.1 ac. wetland impacts for site access
Agricultural Encroachment	None	None	37 acres
Substrate Composition	Levee	Levee	Ag Field
Erodibility of Dredged Material	Minimal	Minimal	Minimal
Reason for New Placement	Accessible, cost effective, environmentally acceptable	Accessible, cost effective, environmentally acceptable	DMMP and potential beneficial use
Capacity	150,000 CY	20,800 CY	437,000 CY

¹ All sites are non-rectangular in shape; see plates EA-1, EA-3, and EA-4 for the actual shape.

Dredging is required regularly in this section of the main channel. The Lock and Dam 18 dredge cut, RM 411.0-412.4, has been dredged 5 times since 1941. These dredging events averaged approximately 72,119 CY (cubic yards), and totaled 360,593 CY. The Furnal Island dredge cut, RM 413.0-414.4, yielded 17,862 CY the only time it was dredged in 2001. The Oquawka dredge cut, RM 414.5-415.2, has been dredged twice since 1961. These dredging events averaged approximately 55,735 CY and totaled 111,470 CY. The total amount of material dredged at these three dredge cuts since 1941 is approximately 489,925 CY.

A total capacity of 510,000 CY is needed to meet the proposed volume of dredged material over the next 40 years. The projections for the Oquawka dredge cut are 1 event every 8 years with a quantity of 40,000 CY per event, the projections for the Lock and Dam 18 dredge cut are 1 event every 6 years with a quantity of 30,000 CY per event, and the projections for the Furnal Island dredge cut are 1 event every 10 years with a quantity of 25,000 CY per event. These are projections only and are subject to change due to the dynamic nature of sediment transport in the UMR. The District will perform dredging as necessary to maintain the 9-foot channel in the UMRS; actual quantities may therefore be greater or lesser. Previous placement of dredged materials has occurred at numerous locations near the dredge cuts, and the use of many of these historic placement areas in the present manner is no longer environmentally practicable. Dredged

material would be placed at Site 3 and Site 8 by both hydraulic and mechanical means and at Site 5 by mechanical means only.

Contaminant testing of the dredged material was done through a grain size analysis. Dredged material was classified into three categories: SP, medium to fine sand; SP, gravelly coarse to fine sand; and SP, medium to fine sand with gravel (Table EA-2). This material is likely to be free from chemical, biological, or other pollutants when it is composed primarily of sand, gravel, or other naturally occurring inert materials, as it is here. Further testing is not required because these samples were greater than 80% sand/gravel. An elutriate test would have been performed to determine if contaminants were present had the material been greater than 20% silt/clay. This would be done because contaminants have a greater affinity for smaller-sized particles. No other testing than a grain size analysis would be performed unless the District is made aware of another reason that this material may be contaminated.

Table EA-2. Grain size analysis of Mississippi River sediment samples for Lock and Dam 18 Upper and Oquawka Lower

		Percent Finer by Weight				
		Samples collected 28-Jul-99				
S I E V E S Z E S	Sample Numbers:	MS-411.0R	MS-411.5R	MS-412.0R	MS-414.7R	MS-415.1R
	1 1/2"	100.0%	100.0%	100.0%	100.0%	100.0%
	3/4"	100.0%	100.0%	100.0%	100.0%	100.0%
	3/8"	100.0%	100.0%	100.0%	100.0%	100.0%
	#4	99.3%	99.5%	100.0%	99.9%	99.5%
	#10	98.1%	97.9%	99.7%	97.9%	91.8%
	#16	96.1%	95.3%	99.5%	92.3%	79.7%
	#30	83.3%	71.7%	98.0%	60.8%	46.3%
	#40	60.7%	40.7%	88.8%	30.3%	21.1%
	#50	24.1%	11.2%	46.2%	7.6%	4.3%
	#70	5.2%	2.1%	10.5%	1.3%	0.7%
	#100	0.9%	0.5%	1.8%	0.4%	0.3%
	#200	0.1%	0.2%	0.1%	0.2%	0.2%
	CLASSIFI- CATION:	SP, MEDIUM TO FINE SAND	SP, MEDIUM TO FINE SAND	SP, MEDIUM TO FINE SAND	SP, MEDIUM TO FINE SAND	SP, MEDIUM TO FINE SAND

Notes:

1. Visual classification of soils is in accordance with "The Unified Soils Classification System (USCS)."
2. Laboratory testing was performed in accordance with EM 1110-2-1906, dated 30 Nov 70, revised 1 May 80 and 20 Aug 86.
3. All samples were oven dried at 110 degrees Centigrade.

III. ALTERNATIVES

Through a multi-agency cooperative effort, the District considered 22 sites and selected a DMMP plan consisting of three sites—Site 3, Site 5, and Site 8. These sites make up Alternative E as shown in Table EA-3. These sites were selected as the final alternative (base plan) because they were operationally feasible and environmentally sustainable. The other alternatives considered each had either unacceptable wetland impacts or did not provide adequate hydraulic placement opportunities for the Oquawka reach dredge cuts. Table EA-4 summarizes all sites originally considered by the On-Site Inspection Team and the decision factor that was most considered for removal or inclusion in the base plan. Plate EA-2 shows the locations of each site considered. The section following the table describes the decision factors in greater detail.

Alternatives were given equal consideration given the limitations of current hydraulic and mechanical dredging technology. Required equipment for hydraulic dredging would include the Dredge Thompson, 1 booster, 6,200 feet of floating pipeline, up to 3,000 feet of shore pipe, and 2 to 3 bulldozers. Mechanical placement would require a minimum of 1 crane barge or backhoe, 1 tender boat, 2 material barges, and 1 end loader/bulldozer.

The distance of the placement area from the dredge cut and the site capacity are primary factors that influence cost. Differences in cost between alternatives for the same site are due to the use of mechanical or hydraulic dredging and the timing of site development during the life of the plan.

The following were considered in the selection process:

- Cost
- Threatened and endangered species
- Wetlands
- Prime farmland
- Property ownership (When a site on private property was considered, site alignment and the percentage of land acquired from an individual's total land ownership were evaluated.)
- Historic and cultural resources
- Floodplain and floodway effects
- Unique natural resources
- Hydraulic dredging return water corridors and effects on aquatic resources (spawning areas, ichthyoplankton, fish migration routes, sport fishing areas, mussel beds, aquatic plant communities, side channels, backwaters)
- Existing land-use plans and property liens

Table EA-3. Alternative placement site combinations considered			
	Alt A	Alt B	Alt C _{exp}
Alternative Life-years	40	40	40
Site Total Cost	<i>Site 2--</i> \$1,077,405 <i>Site 3--</i> \$593,917 <i>Sites 5 & 8--</i> \$2,016,280	<i>Sites 5 & 8--</i> \$3,313,704	<i>Site 1--</i> \$664,382 <i>Site 2_{exp}--</i> \$1,413,391 <i>Site 3--</i> \$2,091,608
TOTAL COST (Present worth)	\$3,687,602	\$3,313,702	\$4,169,382
TOTAL DREDGING REQUIREMENTS (CY)	510,000	510,000	510,000
Cost/CY	\$7.23	\$6.51	\$8.18
Justification	Unacceptable wetland impacts	Inadequate hydraulic placement for Lock & Dam 18 dredge cut	Unacceptable wetland impacts; inadequate hydraulic placement for Oquawka dredge cut

	Alt D	Alt E
Alternative Life-years	40	40
Site Total Cost	<i>Site 2_{exp}--</i> \$1,459,083 <i>Sites 5 & 8--</i> \$2,016,280	<i>Site 3--</i> \$1,505,146 <i>Sites 5 & 8--</i> -\$2,238,484
TOTAL COST (Present worth)	\$3,475,363	\$3,743,631
TOTAL DREDGING REQUIREMENTS (CY)	510,000	510,000
Cost/CY	\$6.81	\$7.34
Justification	Unacceptable wetland impacts	Selected as base plan

Table EA-4. Synopsis of dredged material placement sites and alternatives considered for the Oquawka Reach dredge cuts (plate EA-2)

Sites Considered	Habitat Description-Land Use	Decision Factor
Site 1	Levee Right-of-Way (ROW)	Long transport distance
Site 2	Levee ROW/Agricultural Field	Wetland impacts
Site 2 Expanded	Levee ROW/Agricultural Field	Wetland impacts
Site 3*	Levee ROW	Convenient access, cost effective
Site 4	Levee ROW/Agricultural Field	Small site, not required
Site 5*	Levee ROW	Convenient access, cost effective
Site 6	Levee ROW	Poor river access
GREAT Site 18.36	Developed/Lowland Hardwoods	Long transport distance, limited access
GREAT Site 18.37	Agricultural Field	Restricted river access
GREAT Site 18.38	Agricultural Field	Restricted river access
GREAT Site 18.39	Agricultural Field	Restricted river access
GREAT Site 18.40	Developed	Severe erosion potential, low capacity
GREAT Site 18.41	Historic Placement Site; Dredged Material	Floodplain, wetland, mussel impacts
Site 7 (GREAT Site 18.42)	Agricultural Field	Operational infeasibility
GREAT Site 18.43	Agricultural Field	Long transport distance, limited access
Site 8* (GREAT Site 18.44)	Agricultural Field	Convenient access, wetland impacts
GREAT Site 18.45	Levee ROW/Agricultural Field	Long transport distance
Historic (HD)	Historic Placement Site; Dredged Material	Floodplain and wetland impacts
GREAT Site 18.46	Lowland Hardwoods	Floodplain and wetland impacts
GREAT Site 18.47	Historic Placement Site; Dredged Material	Used only upon OSIT recommendation
Historic (HD)	Historic Placement Site; Dredged Material	Floodplain and wetland impacts
GREAT Site 18.48	Agricultural Field	Restricted river access

* Incorporated into the preferred alternative

A. No Project. The No Project alternative would preclude Federal involvement in the project. Consequently, no dredging would occur. Without dredging, it is probable that shoaling would occur, resulting in the closure of the channel to commercial navigation. The No Project alternative is not feasible because it is contrary to the congressional mandate to maintain a commercial navigation channel.

B. No Change. The No Change alternative would mean “business as usual,” and placement of dredged material would continue at various bankline, island, and inland stockpile areas that are now considered full. Continued long-term placement at the historically used placement sites at the historic rate would result in unacceptable terrestrial and aquatic habitat loss.

C. Floodplain Placement. This alternative proposes placing material on sites within the base floodplain near the dredge cuts. The preferred alternative of this project includes two floodplain sites—Sites 5 and 8 (plates EA-1 and EA-3). These sites are protected by a 50-year levee and are therefore considered to be in the floodplain. Site 3 is protected by a 100-year levee and is therefore considered to be an upland placement site.

The effect that implementing this project would have on flood heights was considered. The District performed a HEC-RAS (Hydrologic Engineering Center - River Analysis System) model run that indicated that the use of Sites 5 and 8 would have negligible impact on the floodplain.

Wetlands were located in some floodplain sites that were evaluated for this project. The District attempted first to avoid, then to minimize, and ultimately to mitigate for wetlands located in the proposed plan. See EA Appendix C for a detailed description of the Mitigation Plan. The cost of this mitigation and quality of the wetlands were considered in the site selection process before a final alternative was selected. The District avoided nearly all wetland impacts in the two floodplain placement sites. Approximately 0.1 acre of wetlands would be impacted for site access between Sites 5 and 8.

Site selection, alignment, and the percentage of land acquired from an individual’s total land ownership were considered and evaluated. Site 8 is seasonally small-grain row cropped, typically with soybeans or corn. Site 5 is not farmed.

In addition to the two selected sites, eight floodplain sites were considered but not selected for this plan for various reasons. GREAT Site 18.40 was not selected because of severe erosion potential, low capacity, and because it has been developed. A wetland floodplain at Site 4, GREAT Sites 18.41 and 18.46, and two Historic Disposal (HD) sites precluded selection of these sites as part of the base plan. GREAT Sites 18.36 and 18.43 were not selected due to their long transport distance from the dredge cut.

D. Bankline. A bankline site is defined as a placement area that is contiguous to an existing shore and encroaches into the river, commonly a beach. One bankline site was considered but not selected. GREAT Site 18.47 is an HD site, but is located at the Oquawka State Wildlife Refuge, and was eliminated from consideration because it is considered to be an ecologically sensitive area.

E. Upland. Upland sites are defined as areas whose elevations are above the 100-year floodplain as determined by the Federal Emergency Management Agency, or those areas protected by a 100-year levee. Site 3 (plate EA-4) is located in the former floodplain of the Mississippi River, but is protected by a 100-year levee, and is therefore considered to be an upland site in this base plan.

Wetlands were located in some upland sites that were evaluated for this project. The District attempted first to avoid, then to minimize, and ultimately to mitigate for wetlands located in the proposed plan. See EA Appendix C for a detailed description of the Mitigation Plan. The cost of this mitigation and quality of the wetlands were considered in the site selection process before a final alternative was selected. Site 3 contains approximately 1.0 acre of wetlands that would be impacted and mitigated.

Of the remaining 10 upland sites, Site 1 and GREAT Site 18.45 were not selected due to a long transport distance from the dredge cut to the placement sites (see table EA-4). Wetland impacts at Sites 2 and 2 Expanded precluded their selection in the base plan, although the District would maintain Site 2 Expanded as a future option for placement due to its convenient location and easy access. Compliance with the National Environmental Policy Act and all other applicable laws and regulations would be documented for Site 2 Expanded if it were to be used in the future. GREAT Sites 18.37, 18.38, 18.39, and 18.48 were not selected due to restricted river access by equipment needed to transport the dredged material to the sites. Sites 6 and 7 (GREAT Site 18.42) are not included in the base plan because the capacity is not needed from Site 6 and it is operationally infeasible to utilize Site 7.

F. Thalweg. The thalweg is defined as the line following the deepest part of the river. Thalweg placement at the Oquawka Reach was eliminated from consideration because it would not meet recommendations made in the 1985 report, *Evaluation of Environmental Impacts of Thalweg Disposal of Dredged Material*.

IV. AFFECTED ENVIRONMENT

The environment affected by the scope of this EA consists of agricultural fields at Site 8 and land adjacent to existing levees at Sites 3 and 5. Site 5 would be used as river access to Site 8. Site 3 also contains a total of approximately 1 acre of small, scattered wetlands and has the potential for minor agricultural impacts. Approximately 0.1 acre of forested wetlands would be filled along a small channel between Sites 5 and 8 for equipment access from the river to Site 8. A culvert would be installed underneath the fill material to allow for maintenance of water flow through the channel. In addition, a narrow band of riparian corridor would be temporarily sacrificed to move the dredged material to Sites 3, 5, and 8. Return water would temporarily affect drainage ditches south of Site 8 and west of Site 3 during hydraulic dredging. However, these impacts would be minimal. Approximately 1.1 acres of compensatory wetland mitigation would be created at an agricultural field in Des Moines County, Iowa, at RM 422, within the Iowa River-Flint Creek Levee District No. 7. This mitigation would be accomplished through cessation of agricultural activity and plugging of existing drainage tiles.

V. ENVIRONMENTAL IMPACTS OF THE PREFERRED ALTERNATIVE

Effects of the preferred alternative on natural resources and historic properties are summarized in Table EA-5 on the next page.

Table EA-5. Effects of the preferred action on natural resources and historic properties, as well as the associated regulatory authorities

Types of Resources	Regulatory Authorities	Measurement of Effects
Air quality	Clean Air Act, as amended (42 U.S.C. 165h-7, et seq.)	No significant effect
Areas of particular concern within the coastal zone	Coastal Zone Management Act of 1972, as amended	Not present in planning area
Endangered and threatened species critical habitat	Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et seq.)	No significant impacts anticipated
Fish and wildlife	Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.)	No significant effect
Floodplains	Executive Order 11988, Floodplain Management	No significant effect
Historic and cultural properties	National Historic Preservation Act of 1966 as amended (16 U.S.C. 470, et seq.)	No effect
Prime and unique farmland	CEQ Memorandum of Aug. 11, 1980; Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act	Would result in loss of some prime farmland. Requirements met by minimizing agricultural impacts to extent consistent with the maintenance of safe navigation.
Water quality	Clean Water Act of 1977, as amended (33 U.S.C. 1251, et seq.)	No significant effect
Wetlands	Executive Order 11990, Protection of Wetlands, Clean Water Act of 1977, as amended (43 U.S.C. 1857h-7, et seq.)	1.1 acre of wetlands to be impacted would be mitigated
Wild and scenic rivers	Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271, et seq.)	Not present in planning area

A. Historic Properties. A January 2002 final report entitled, *Phase I Geoarchaeological Investigation of 108.2 Acres Near Oquawka, Henderson County, Illinois*, was prepared by Jim Snyder and Jeff Anderson with Michael J. McNerney, Principal Investigator, American Resources Group, Ltd., Carbondale, Illinois. This report covered Sites 5 and 8 and found three historic properties (11HE433, 434, & 435), all located in Site 8. Only one of these historic properties (11HE435) was found to be potentially eligible for inclusion in the National Register of Historic Places (see the District letter dated December 5, 2001, and the Illinois Historic Preservation Agency (IHPA) response dated December 31, 2001—both in EA Appendix A). As set out in the District and IHPA correspondence just cited, 11HE435 shall be avoided by developing DMMP Site 8 in such a way that a 50-foot buffer zone would be established around 11HE435 in order to avoid any activity within the area of 11HE435 or its buffer zone.

Site 3 is located within the existing disturbed zone of levee construction, and dredged material placement here is a type of activity that does not have the potential to affect historic properties, assuming such properties were present prior to the disturbance associated with levee construction. No further consideration of historic properties at Site 3 would be made under Section 106 of the National Historic Preservation Act.

If any undocumented historic properties are identified or encountered during the undertaking, the District would discontinue all dredging and/or dredged material placement in the affected area and resume coordination with either the Iowa or Illinois State Historic Preservation Offices to identify the significance of the historic property and determine potential effects under Section 106 of the National Historic Preservation Act of 1966 and 36 CFR Part 800.

B. Created Resources. The UMR has been changed from its natural condition. It has been modified to meet the needs of people in many ways, including locks, dams, and regulating structures for navigation; refuges for fish and wildlife management; levees and riprapping for flood and erosion control; highway and railroad embankments, barge terminals and bridges for transportation; and beaches and marinas for recreation. Returning the river to a natural free-flowing condition would not be practical.

Pool 18 of the UMR may be considered a created resource since it is a natural resource modified by humans to facilitate a 9-foot river channel for commercial navigation. The series of pools and channels were created and are controlled by the locks and dams in conjunction with the other components of the Mississippi River 9-Foot Navigation Channel Project. Channel maintenance dredging operations counteract the natural process of sediment aggradation that sometimes serves as an impediment to commercial navigation. The land at the new, proposed placement sites also would be considered created resources since they were once forested bottomlands and wetlands that were converted to managed farmland and levee systems.

C. Natural Resources. Site 3 contains 1 acre of wetland resources, but does not contain known critical wildlife habitats, sand beaches, water-oriented recreational facilities, public parks, recreational areas, or water sport areas. Sites 5 and 8 do not contain any of those natural resources, although the access area between Sites 5 and 8 would impact approximately 0.1 acre of wetlands. The District performed a HEC-RAS (Hydrologic Engineering Center-River Analysis System) model run that indicated that the runoff from the placement sites would be maintained within the banks and showed no indications that erosion would be a problem. No recreational benefits would be expected from placement at Sites 3, 5, and 8.

Through a multi-agency effort, the District considered 22 sites and selected a preferred alternative baseline plan with one site that would require the conversion of prime farmland (37 acres) and two sites that would not, although portions of Site 3 are adjacent to prime farmland, so a Farmland Conversion Impact Rating was done for this site in case minor unavoidable farmland impacts become necessary. The District recognizes that the widespread transformation of agricultural land is undesirable and has attempted to minimize agricultural impacts to the extent consistent with the maintenance of safe navigation.

Portions of the riparian zone adjacent to Sites 3, 5, and 8 would require woody and herbaceous understory vegetation clearing for dredged material access paths. Hydraulic dredging would require the creation of approximately 20-foot-wide paths for shore pipe access, and mechanical dredging would require clearing of an approximately 100-foot-wide path for offloading and movement of dredged material from barges to the site. Return water would flow overland and through existing drainage ditches to pump stations and finally into the UMR at approximate

RM 411.5. River access to Site 3 is potentially along the site's entire length. To minimize riparian zone impacts, the District would select and reuse paths that avoid large trees and utilize existing canopy breaks where feasible. These paths would naturally revegetate between dredging events, and the new openings in the forest canopy should quickly regenerate with tree species such as silver maple and cottonwood when the project is completed. Though no endangered species would be affected by this project, mature trees would not be cleared between April 1st and September 30th to avoid any potential for disturbance by Indiana bat habitat.

The Illinois DNR and the District performed a mussel survey on September 24, 2001, adjacent to Site 5. This survey found that the least harmful path to access shore pipe from the dredge cut to Site 5 and on to Site 8 would be at the most upstream side of Site 5. This area had the lowest density of mussels, but is the shallowest area and has potential for resuspended sediments to migrate down to the mussel bed downstream. The access area between Sites 5 and 8 has been located at the upstream end of Site 5 in order to avoid the higher quality mussel beds downstream of that area.

Other impacts from this project may include biota that utilize the crop fields at Site 8 for feeding, loafing, dusting, etc. Though habitat improvements are limited, turtle nesting may be facilitated as a result of this project, and the elevated floodplain placement site at Site 8 could function as a terrestrial refuge during floods. Several conclusions were reached in a report entitled, *Final Report, Natural Resource Survey of Fauna Inhabiting Dredged Material Disposal Sites in Pool 18 of the Upper Mississippi River*, February 1985. No significant difference was detected between the dredged material placement sites and the floodplain forest areas with respect to small mammal capture rates. Evidence of opossum and cottontail rabbit usage was only observed on dredged material placement sites. Fox squirrels and woodchuck signs were observed in both habitat types. Turtles, snakes, and toads were more abundant on dredged material placement sites.

D. Cumulative Impacts. The District identified wetlands and floodplain agricultural fields as the primary resources impacted by the placement of dredged material in this EA. These habitats were quantified by a query of land cover/use from 1989 landsat thematic mapper data using the United States Geological Survey's *Habitat Needs Assessment* (HNA) query tool. Systemic changes have been discussed in the *Ecological Status and Trends of the Upper Mississippi River System 1998*, and cumulative impacts of channel maintenance dredging have been discussed in the *Upper Mississippi River and Illinois Waterway Cumulative Effects Study*, dated April 2000 (WEST Consultants, Inc. Contract No. DACW25-97-R-0012).

The HNA information evaluation identified 16 landcover habitat types in addition to 33,502.8 acres of "No Photo Coverage" for a total of 134,450.1 acres in and around Pool 18. They are:

<u>Landcover Type</u>	<u>Total Acres in Pool 18</u>
1. Agriculture	56,913.5
2. Developed	3,220.3
3. Floating-leaved aquatic bed	739.0
4. Grassland	174.4
5. Mesic bottomland hardwood forest	5,438.9
6. Open water	12,310.4
7. Populus community	67.0
8. Salix community	382.9
9. Sand/mud	192.8

10.	Scrub/shrub	3,618.5
11.	Seasonally flooded emergent perennial	200.7
12.	Semi-permanently flooded emergent annual	0.0
13.	Semi-permanently flooded emergent perennial	839.9
14.	Submersed aquatic bed	889.5
15.	Wet floodplain forest	13,334.5
16.	Wet meadow	2,625.0

Past Actions: Dredged material has been placed on approximately 0.9% (8,535 acres) of aquatic and floodplain habitat throughout the Upper Mississippi River System (UMRS), including the St. Paul, Rock Island, and St. Louis Districts. Almost a third of this placement occurred within the Rock Island District. The proposed project discussed in this EA is in UMR Pool 18 where 12 historic and/or chronic dredge cuts are located. Six of these dredge cuts have been dredged since 1990. From 1940 to 2000, over 7 million CY of material has been dredged from Pool 18 and placed at numerous locations near each dredge cut in various habitats including floodplain forest, bankline, thalweg, urban, and wetland areas. Virtually no placement (2 acres placed between 1990 and 1998) of agricultural land has been used for placement of dredged material.

During the period from 1939 to 1989, of the approximately 134,450 acres evaluated for HNA coverage in Pool 18, approximately 450 acres (or 0.3%) was used for dredged material placement. The major percentage of impact occurred to open water (215 acres or 1.7% of total available in Pool 18), followed by wet floodplain forest (167 acres or 1.3% of total available in Pool 18). This accounts for 382 acres or 85% of the 450 acres used but less than 0.2% of the total land coverage evaluated in Pool 18. Other land coverage used for placement of dredged material (acres rounded to whole numbers): 19 acres of wet meadow (0.7% of total available in Pool 18), 18 acres of sand/mud (9.5% of total available in Pool 18), 12 acres of developed land (0.4% of total available in Pool 18), 11 acres of scrub/shrub (0.3% of total available in Pool 18), 4 acres of submersed aquatic bed (0.4% of total available in Pool 18), and the other cover types using 1 acre or less.

During the period from 1990 to 1998, of the approximately 134,450 acres evaluated for HNA coverage in Pool 18, approximately 46 acres (or less than 0.04%) was used for dredged material placement. The major percentage of impact still occurred to open water (18.5 acres or 0.2% of total available in Pool 18), followed by wet floodplain forest (13 acres or 0.1% of total available in Pool 18). This accounts for 31.5 acres or 68% of the 46 acres used during this time period for placement activities but less than 0.02% of the total land coverage evaluated. Other land coverage used for placement of dredged material: 0.1 acre of wet meadow (less than 0.1% of total available in Pool 18), 2.6 acres of sand/mud (1.4% of total available in Pool 18), 2.7 acres of developed land (0.1% of total available in Pool 18), 6.5 acres of scrub/shrub (0.2% of total available in Pool 18), 0.1 acre of submersed aquatic bed (less than 0.1% of total available in Pool 18) and 2 acres of agricultural land (less than 0.01% of total available in Pool 18). The rest of the landcover types were not used.

Present Actions: Present actions refer to the period of time from when long-term chronic site dredged material management plans (DMMPs) were initiated to the present.

DMMP Plans on the UMR from Guttenberg, IA to Saverton, MO (31 of 42 dredge cuts completed)
Total floodplain agricultural field conversion - 220 acres (0.05%)

DMMP Plans within Pool 18:

Keithsburg Reach (Keithsburg Lower/Huron Island and Keithsburg Upper DMMP combined)

Benton Island (completed)

Oquawka Reach

Current floodplain agricultural field converted for DMMP in Pool 18 – 17 acres (0.03%)

Total floodplain agricultural field conversion proposed by this plan – 31.8 acres for placement and 1.1 acres for mitigation (0.05%)

Reasonably Foreseeable Future Actions – Future projections indicate that dredging always will be required to maintain the 9-foot channel in the UMRs. The District plans to finalize the remaining UMR DMMPs within 2 years of the publication of this EA, and the remaining non-chronic dredged sites will begin to be addressed in Pool Plans within 2 years of the publication of this EA.

Reasonably Foreseeable Future Actions in Pool 18: These DMMPs and other future dredged material placement actions may affect additional floodplain agricultural fields and wetlands as well as other habitat. Placement sites within Pool 18 that have been addressed in previous plans or EAs, but have not yet been utilized, include limited placement on 12 acres of Kingston Bar and potential future placement on 20 acres of Johnson Island. The Keithsburg DMMP proposes to convert 28 acres of floodplain agricultural field for placement and 15 acres for compensatory wetland mitigation.

The Oquawka Reach of Pool 18 should not require additional dredged material placement areas for channel maintenance during the 40-year life of this plan, once it is implemented. Other dredging for the maintenance of harbors and industrial channels may still be required and would be addressed in other NEPA documentation. Projections of future dredging needs are subject to change due to the dynamic nature of sediment transport in the UMR, and future actions may impact previously used bankline or agricultural field habitat.

Associated Actions in Pool 18: There are a total of 126 wing dams, closing structures, and bankline protection structures, all but two of which were constructed in Pool 18 between 1889 and 1929. The most recent rock construction in Pool 18 includes two short wing dams (225' and 450') at RM 420 (L) in 1996. Additional work could be done in the lower portion of the pool in the future.

The District's regulatory database shows that 164 regulatory actions have occurred in and adjacent to Pool 18 from 1960 through 2000, with the majority of actions taking place over the last 20 years. These actions include Section 10 (construction of structures in navigable waters, not involving dredged or fill material) and Section 404 (construction projects that affect the waters of the United States) regulatory actions. A total of 41 or 25% of these projects have related directly to dredging, with 8.5% being Federal dredging projects (generally main channel dredging) and 16.5% being non-Federal dredging projects. (Prior to 1980, the District did not issue itself a permit for channel maintenance dredging.) The District evaluates the impact of these regulatory actions in combination with channel maintenance activity on a continuous and ongoing basis, actively soliciting responses to these actions from the public, State, and other Federal agencies through the Clean Water Act permit process.

The District continues to identify practical methods for the quantitative assessment of the cumulative impacts of dredging through impact analysis studies of mussels, plants, sedimentation,

invertebrates, and fish pursuant to Section 404 of the Clean Water Act. Findings from these studies will be used in the future consideration of placement site development and cumulative impacts of dredged material placement on many types of habitat.

The proposed project has identified and taken into account cumulative impacts, considered alternative actions that could lessen such adverse impacts, and is, to the extent practicable, compatible with State, unit of local government, and private programs and policies to protect floodplain agricultural field and wetland habitats. The proposed project would not cumulatively exceed any known biological or social thresholds.

E. Endangered Species. Early coordination with State and Federal resource agencies revealed no objections or concerns over potential impacts to any State or Federal threatened or endangered species. Three federally listed endangered or threatened species are known from the Pool 18 area:

Indiana Bat (*Myotis sodalis*) - Federally Endangered

The Indiana bat is listed to be present in Des Moines County in Iowa and Henderson County in Illinois. Indiana bats are not believed to occur in the project area. Indiana bat females move north in the spring to establish small maternity colonies within wooded riparian areas, floodplain forests, and upland woodlots and return to hibernacula in the late summer/early fall. While this bat may forage along the forested fringes and within nearby forested areas, this project would not affect foraging behavior or critical refugia (caves and roost trees).

Higgins' Eye Pearly Mussel (*Lampsilis higginsii*) - Federally Endangered

The Higgins' Eye Pearly Mussel is listed to be present in Des Moines County, Iowa, and Henderson County, Illinois. This species prefers sand/gravel substrates with swift currents and is most often in the main channel border or in open, side channel habitat. Site 5 borders the main channel, though Rock Island District and Illinois DNR staffs conducted a mussel survey at the main channel border of Site 5 on September 24, 2001, and did not locate any Higgins' Eye Pearly Mussels or suitable habitat for the species.

Bald Eagle (*Haliaeetus leucocephalus*) - Federally Threatened

The bald eagle is listed as wintering and breeding in Des Moines County, Iowa, and wintering in Henderson County, Illinois. It normally migrates south to overwinter along the UMR. Bald eagles begin to arrive in late November or early December after dredging activity has ceased for the year. They forage for fish where they can find open water, such as the tailwaters below the lock and dam complexes, and rest in the larger trees along the shoreline. These trees also provide excellent vantage points for fishing. Bald eagles seek roost trees for shelter from winter weather in the evening. This project does not involve significant clearing of mature trees and would not affect this species.

VI. ENVIRONMENTAL IMPACTS OF NONPREFERRED ALTERNATIVES

A. No Project. If no project were implemented, the natural resources of the area would gradually change as the main channel shallows over time. Channel closure from sedimentation would cause commercial navigation to cease, which leads to the conclusion that the No Project alternative is not practicable.

B. No Change. Under the No Change alternative, large quantities of dredged material would continue to be placed at historic sites. This would likely result in unacceptable natural resource destruction from over-utilization.

C. Floodplain. Implementation of the floodplain alternative solely in bottomland forest sites would result in the loss of some mature trees and all of the understory vegetation currently on these sites. These losses translate into greater wildlife habitat losses when compared to the preferred alternative. Wetlands were located in some floodplain sites that were evaluated for this project. Utilization of these sites would not comply with Executive Order 11990: Protection of the Wetlands unless these sites were mitigated. The quality of the wetland and the cost of this mitigation was considered in the site selection process before a final alternative was selected. Over-utilization of wetland sites would be ecologically unwise and not in compliance with Section 404 of the Clean Water Act.

D. Bankline. Implementation of a bankline alternative, where the bankline is utilized exclusively, would result in greater aquatic habitat disruption than the preferred alternative. In addition, permanent terrestrial encroachment into aquatic habitats would result in fisheries habitat losses and could threaten flow in side channels and chutes, thereby isolating backwaters.

E. Upland. Implementation of upland sites exclusively would be impractical, given the current limitations of dredging technology and the cost of placement. Few suitable upland sites exist within this region. Even if upland areas could be reached, many have highly erosive slopes or contain ecologically valuable bluffland forests.

F. Thalweg. No suitable thalweg sites exist in this area. Implementation of a thalweg alternative would not be in compliance with depth recommendations made in the 1985 *Evaluation of Environmental Impacts of Thalweg Disposal of Dredged Material*.

VII. PROBABLE ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED

A corridor from the river to the placement sites would be cleared of vegetation to allow heavy machinery to manipulate and install the dredge shorepipe. Understory vegetation would be temporarily lost during this and subsequent dredging events but should return after removal of the pipe when dredge work is completed.

There would be minor wildlife habitat loss from using Site 3, Site 5, and Site 8. The presence of crop fields in the vicinity of sites that affect agricultural fields minimizes loss of a potential food source in the conversion of land for dredged material placement.

Approximately 1.1 acres of wetland would be impacted at Site 3 and the access area between Sites 5 and 8. Wetland impacts have been minimized to the extent practicable, and the 1.1 acres of unavoidable wetland impact would be mitigated through restoration of 1.1 acres of tiled and drained farmland at RM 422R.

VIII. COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

A summation of compliance with environmental statutes and regulations can be found in Table EA-6.

Table EA-6. Applicability and compliance with environmental protection statutes and other environmental requirements affecting the proposed project

Federal Environmental Protection Statutes and Requirements	Applicability/Compliance
Archaeological and Historic Preservation Act, 16 U.S.C. 469, et seq.	Full compliance
Clean Air Act, as amended, 42 U.S.C. 1857h-7, et seq.	Full compliance
Clean Water Act, Sections 404 and 401	Full compliance
Coastal Zone Management Act of 1972, as amended	Not applicable
Endangered Species Act of 1973, as amended, 16 U.S.C. 1531, et seq.	Full compliance
Environmental Effects Abroad of Major Federal Actions (Executive Order 12114)	Not applicable
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not applicable
Farmland Protection Policy Act, 7 U.S.C. 4201, et seq.	Full compliance
Federal Water Protection Recreation Act, 16 U.S.C. 460-1(12), et seq.	Full compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.	Full compliance
Floodplain Management (Executive Order 11988)	Full compliance
Land and Water Conservation Fund Act, 16 U.S.C. 460/-460/-11, et seq.	Not applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, et seq.	Not applicable
National Economic Development (NED) Plan	Full compliance
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full compliance
National Historic Preservation Act, 16 U.S.C. 470a, et seq.	Full compliance
Protection of Wetlands (Executive Order 11990)	Full compliance through mitigation
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	Not applicable
Wild and Scenic Rivers Act, 16 U.S.C. 1271, et seq.	Full compliance
<ul style="list-style-type: none">• <u>Full compliance.</u> Having met all requirements of the statute for the current stage of planning (either preauthorization or postauthorization).• <u>Not applicable.</u> No requirements for the statute required; compliance for the current stage of planning.	

A. Archaeological and Historic Preservation Act. The project is in compliance with this act.

B. Clean Air Act, as amended. No aspect of the proposed project, neither short-term nor long-term, has been identified that would result in violations to air quality standards. The environment would not be exposed to contaminants/pollutants in such quantities and of such

duration as may be or tend to be injurious to human, plant, or animal life, or property, or which unreasonably interferes with the comfortable enjoyment of life, or property, or the conduct of business.

C. Clean Water Act (Sections 401 and 404), as amended. A Section 404(b)(1) Evaluation was prepared and is attached as EA Appendix B. Certification under Section 401 of this Act from the States of Illinois and Iowa would be obtained before utilization of the new site. Due to the unavoidable impacts to approximately 1.1 acres of wetlands located at Site 3 and the access area between Sites 5 and 8, compensatory mitigation would be provided. See EA Appendix C for the compensatory mitigation plan.

D. Endangered Species Act of 1973, as amended. As previously discussed, the proposed project would not impact any species listed or proposed for listing under the Federal Endangered Species Act.

E. Farmland Protection Policy Act of 1981. Federal, State, and local agencies have evaluated the proposed sites using the appropriate, approved criteria. The District and the NRCS State Soil Scientist for Illinois completed an AD-1006 Farmland Impact Conversion Rating (Table EA-7) for Site 8. The District and the NRCS Resource Soil Scientist for the Southeast Iowa Soil Resource Service Center completed an AD-1006 Farmland Impact Conversion Rating (Table EA-8) for Site 3. These Farmland Impact Conversion Ratings utilized an area larger than the expected size of the placement area to accommodate slight placement site realignment that is often necessary during later phases of the project. Failure to allow for these changes would result in duplicative effort and re-coordination for minor changes in the plan. Unfortunately, this often results in conflicting numbers between the AD-1006 Form (113.2 acres) and those used in the EA (37 acres). This change invariably results in less actual farmland conversion than the AD-1006 reports.

The District recognizes that the transformation of agricultural land, particularly prime farmland, is undesirable but sometimes necessary to meet the District's mandate of maintaining the navigation system. The proposed project would result in the conversion of approximately 37 acres of prime farmland to non-agricultural use. The proposed project has identified and taken into account the adverse effects, considered alternative actions that could lessen such adverse effects, and is, to the extent practicable, compatible with state, unit of local government, and private programs and policies to protect farmland.

F. Federal Water Project Recreational Act. No opportunities for recreational development or aspects of the proposed new site conducive to recreational development have been identified.

G. Fish and Wildlife Coordination Act. Project plans have been coordinated with the U.S. Fish and Wildlife Service, the Illinois Department of Natural Resources, and the Iowa Department of Natural Resources. The District's coordination letter and resource agency responses appear in EA Appendix A.

Table EA-7.

U.S. Department of Agriculture				
FARMLAND CONVERSION IMPACT RATING				
PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request		
Name Of Project Oquawka Reach DMMP		Federal Agency Involved U.S. Army Corps of Engineers		
Proposed Land Use Dredged Material Placement Site		County And State Henderson County, Illinois		
PART II (To be completed by SCS)		Date Request Received By SCS 20 December 2000		
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply — do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated —
Major Crop(s) Corn, Soybeans, Wheat, Hay		Farmable Land In Govt. Jurisdiction Acres: 29,633,500 % 97	Average Farm Size 372	
Name Of Land Evaluation System Used Illinois		Name Of Local Site Assessment System Statewide	Date Land Evaluation Returned By SCS 21 December 2000	
PART III (To be completed by Federal Agency)		Alternative Site Rating		
A. Total Acres To Be Converted Directly		Site A (6) 0.5	Site B (7) 101.2	Site C (8) 108.2
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site		0.5	101.2	108.2
PART IV (To be completed by SCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland		0.5	101.5	108.2
B. Total Acres Statewide And Local Important Farmland		—	—	—
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0	0.00036	0.00036
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		87.5	85.4	87.5
PART V (To be completed by SCS) Land Evaluation Criterion				
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		98.0	97.0	98.0
PART VI (To be completed by Federal Agency)		Maximum Points		
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))				
1. Area In Nonurban Use				
2. Perimeter In Nonurban Use				
3. Percent Of Site Being Farmed				
4. Protection Provided By State And Local Government				
5. Distance From Urban Builtup Area				
6. Distance To Urban Support Services		(see attached Illinois Statewide assessment factors)		
7. Size Of Present Farm Unit Compared To Average				
8. Creation Of Nonfarmable Farmland				
9. Availability Of Farm Support Services				
10. On-Farm Investments				
11. Effects Of Conversion On Farm Support Services				
12. Compatibility With Existing Agricultural Use				
TOTAL SITE ASSESSMENT POINTS		200*	136	126
PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)		100	98	97
Total Site Assessment (From Part VI above or a local site assessment)		200*	136	126
TOTAL POINTS (Total of above 2 lines)		300*	234	223
Site Selected:		Date Of Selection		
Reason For Selection:		Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>		

*** When using the Illinois Site Assessment Factors, 200 points are assigned to the Site Assessment Section of the LESA system for a maximum score of 300 points**

(See Instructions on reverse side)

Form AD-1006 (10-83)

Illinois Site Assessment Score Sheet

PART VI-A Illinois Site Assessment Criteria	Maximum Points	Site 6*	Site 7*	Site 8
1. Land Use On The Site	20	10	20	20
2. Adjacent Land Use	20	16	8	12
3. General Character Of Area Within 1 ½ Miles Of Site	20	10	10	10
4. Distance To City	20	16	8	16
5. Zone Use Of Proposed Site	20	20	20	20
6. Zoned Use Of Land Adjacent To Proposed Site	20	20	20	20
7. Planned Land Use Of Proposed Site	20	20	20	20
8. Compatibility Of Proposed Use With Surrounding Land Uses	20	0	0	0
9. Alternative Sites Proposed On Less Productive Land	10	0	10	10
10. Availability Of Central Water System	10	6	0	4
11. Availability Of Central Waste Disposal System (Sewer)	10	8	4	8
12. Transportation	10	10	6	8
TOTAL SITE ASSESSMENT POINTS	200	136	126	148

* Sites 6 and 7 were eliminated from the final DMMP and would not be converted to non-agricultural land.

Table EA-8.

U.S. Department of Agriculture						
FARMLAND CONVERSION IMPACT RATING						
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request <u>1/23/02</u>			
Name Of Project <u>Oquawka Reach DMMP</u>			Federal Agency Involved <u>U.S. Army Corps of Engineers</u>			
Proposed Land Use <u>Dredged material placement site</u>			County And State <u>Des Moines County, Iowa</u>			
PART II (To be completed by SCS)			Date Request Received By SCS			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply — do not complete additional parts of this form).			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated <u>41000</u>	Average Farm Size <u>305 ac.</u>
Major Crop(s) <u>corn</u>	Farmable Land In Govt. Jurisdiction Acres: <u>205,675</u> % <u>79</u>		Amount Of Farmland As Defined in FPPA Acres: <u>147,320</u> % <u>56</u>			
Name Of Land Evaluation System Used <u>Des Moines Co</u>	Name Of Local Site Assessment System <u>none - FPPA</u>		Date Land Evaluation Returned By SCS <u>Jan. 28, 2002</u>			
PART III (To be completed by Federal Agency)			Alternative Site Rating			
			Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly			<u>20.5</u>	<u>15.0</u>		
B. Total Acres To Be Converted Indirectly						
C. Total Acres In Site			<u>20.5</u>	<u>15.0</u>		
PART IV (To be completed by SCS) Land Evaluation Information						
A. Total Acres Prime And Unique Farmland			<u>20.5</u>	<u>15.0</u>		
B. Total Acres Statewide And Local Important Farmland			<u>0</u>	<u>0</u>		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted			<u>40.1</u>	<u>40.1</u>		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value			<u>44.9</u>	<u>48.2</u>		
PART V (To be completed by SCS) Land Evaluation Criterion						
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)			<u>78.0</u>	<u>76.0</u>		
PART VI (To be completed by Federal Agency)						
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))			Maximum Points			
1. Area In Nonurban Use			<u>15</u>	<u>15</u>	<u>15</u>	
2. Perimeter In Nonurban Use			<u>10</u>	<u>10</u>	<u>10</u>	
3. Percent Of Site Being Farmed			<u>20</u>	<u>20</u>	<u>20</u>	
4. Protection Provided By State And Local Government			<u>20</u>	<u>0</u>	<u>0</u>	
5. Distance From Urban Builtup Area			<u>15</u>	<u>15</u>	<u>15</u>	
6. Distance To Urban Support Services			<u>15</u>	<u>10</u>	<u>10</u>	
7. Size Of Present Farm Unit Compared To Average			<u>10</u>	<u>10</u>	<u>10</u>	
8. Creation Of Nonfarmable Farmland			<u>10</u>	<u>8</u>	<u>0</u>	
9. Availability Of Farm Support Services			<u>5</u>	<u>5</u>	<u>5</u>	
10. On-Farm Investments			<u>20</u>	<u>20</u>	<u>20</u>	
11. Effects Of Conversion On Farm Support Services			<u>10</u>	<u>0</u>	<u>0</u>	
12. Compatibility With Existing Agricultural Use			<u>10</u>	<u>0</u>	<u>0</u>	
TOTAL SITE ASSESSMENT POINTS			160	<u>113</u>	<u>105</u>	
PART VII (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)			100	<u>78</u>	<u>76</u>	
Total Site Assessment (From Part VI above or a local site assessment)			160	<u>113</u>	<u>105</u>	
TOTAL POINTS (Total of above 2 lines)			260	<u>191</u>	<u>181</u>	
Site Selected:			Date Of Selection		Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Reason For Selection:						

(See Instructions on reverse side)

Form AD-1006 (10-83)

(Site 2 Expanded was eliminated from the final DMMP and would not be converted to non-agricultural land.)

H. Floodplain Management (Executive Order 11988). Implementation of the preferred alternative would avoid, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of the base floodplain. It also would avoid direct and indirect support of development or growth (construction of structures and/or facilities, habitable or otherwise) in the base floodplain wherever there is a practicable alternative. Based on HEC-RAS modeling, the use of the preferred alternative for dredged material placement would not significantly increase the water surface elevation for the 100-year event. The District would obtain and adhere to all stipulations of the Floodplain permit from the State of Illinois and the State of Iowa prior to implementation of this proposed project.

I. National Environmental Policy Act of 1969, as amended. The compilation of this EA and the signing of the Finding of No Significant Impact fulfill NEPA compliance.

J. National Historic Preservation Act of 1966. As previously discussed, the project would have no effect on historic properties as the only site potentially eligible for inclusion in the National Register of Historic Places shall be avoided.

K. Protection of Wetlands (Executive Order 11990). As previously discussed, approximately 1.1 acres of wetlands would be impacted as a result of this project. Compensatory mitigation would be provided in order to replace the functions and values of those wetlands through the creation of approximately 1.1 acres of wetlands. The proposed action includes all practicable measures to minimize harm to wetlands, which may result from dredged material placement.

L. Rivers and Harbors Act. The proposed plan would not place any obstruction across navigable water nor would it place obstructions to navigation outside established Federal lines.

M. Wild and Scenic Rivers Act of 1968, as amended. This section of the UMR is not listed in the (NRI) National Rivers Inventory. The NRI is used to identify rivers that may be designated by Congress to be component rivers in the National Wild and Scenic Rivers Systems.

IX. RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

The UMR is a vital component of the national transportation infrastructure. It will continue to serve long-term recreational, commercial, and environmental interests with timely and appropriate maintenance.

Dredging requirements would be reevaluated periodically during the 40-year project life.

X. ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES IF PROJECT IS IMPLEMENTED

Fuel consumed, manpower expended, and the commitment of construction materials and equipment are considered irretrievable. The loss of agricultural productivity derived from Site 8 is considered irretrievable and irreversible. The loss of wetland vegetative and wildlife productivity within Site 3 and the access area between Sites 5 and 8 are also considered irretrievable and irreversible. No other aspects of the proposed action are considered irreversible.

XI. SOCIAL AND ECONOMIC EFFECTS OF PROPOSED ACTION

A. Community and Regional Growth. No adverse impacts to the growth of the community or region would be realized as a direct result of the proposed project. However, the Upper Mississippi River is a vital component of the national transportation infrastructure and has provided stimulus for the growth of river communities and the entire Midwest Region. Maintenance of the navigation channel would indirectly help provide for continued growth opportunities in the local communities and the region.

B. Community Cohesion. The use of these new placement sites would not affect overall community cohesion. No public opposition has been expressed, nor is any expected. All sites are located behind existing flood control levees, and the levee districts support the use of the proposed placement sites. The landowner at Site 8 may have some objections to the use of his land, depending on how the final plan is developed and the amount of land to be acquired.

C. Displacement of People. Use of these sites would not require any residential relocations.

D. Property Values and Tax Revenues. Material placement at these sites would remove the property from the levee districts' tax roles and result in a reduction in tax revenues.

E. Public Facilities and Services. Maintenance of the navigation channel provides positive impacts to public facilities and services. No other impacts to public facilities and services would occur; no new facilities would be added.

F. Life, Health, and Safety. The proposed plan would not adversely impact life, health, or safety issues.

G. Business and Industrial Growth. No significant impacts to business or industrial activity would result from the proposed project. No business or industrial relocations would be required.

H. Employment and Labor Force. No long-term impacts on employment or labor force in the project vicinity would result from the proposed project.

I. Farm Displacement. The conversion of prime farmland to non-agricultural uses would be required at one of the sites: Site 8 – 37 acres. In addition, there may be minor impacts to prime farmland at Site 3 if the dredged material goes beyond the existing site boundaries. However, no farms would be displaced as a result of the proposed project.

J. Noise Levels. Heavy machinery would temporarily increase noise levels during project construction. No permanent impacts are evident.

K. Aesthetics. No significant impacts to the overall aesthetic resources of the area are anticipated. There is one residence located approximately 800 feet west of Site 3. Visual impacts would be minimized by the buffer of trees between the site and the house.

XII. RELATIONSHIP TO LAND-USE PLANS

Currently there are no known land-use planning documents for the areas proposed for dredged material placement. Dredged material would be periodically placed on the three sites of the preferred alternative.

XIII. CONCLUSIONS

The UMR has national significance as an avenue for waterborne commerce that needs to be maintained for transportation of agricultural goods and other products. Unfortunately, there are unavoidable localized impacts associated with the placement of the large quantities of dredged material necessary to maintain the navigation corridor. Analysis of several alternatives for this project concluded that the utilization of the preferred alternative, floodplain placement at Sites 5 and 8 and upland placement at Site 3, best achieves the project's goals and objectives. This EA may be used in support of a base plan for a potential Henderson #3 Section 204 project. These sites may be used for the emergency placement of dredged material following the District's normal real estate procedures. This EA describes an interim strategy for dredged material placement that could be used until a long-term plan can be developed.

XIV. COORDINATION

The coordination letters from the Rock Island District for this project can be found in EA Appendix A followed by any responses received. Coordination was initiated early and continued throughout the planning process. The following agencies and individuals were contacted:

- 61 Landowners (see distribution list on page A-12 in Appendix A)
- Two Rivers Levee & Drainage Association
- Henderson County Drainage District 3
- Illinois Department of Natural Resources
- Illinois Environmental Protection Agency
- Illinois Department of Agriculture
- Illinois Corn Growers Association
- Illinois State Historic Preservation Officer (Illinois Historic Preservation Agency)
- Iowa Corn Growers Association
- Iowa Department of Natural Resources
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency, Regions V & VII
- U.S. Coast Guard
- U.S. Department of Agriculture, Natural Resources Conservation Service

A listing of those who were provided with a copy of this EA is located in EA Appendix D.

Howard Pruett and John Robb, Henderson County Drainage District #3 (HCDD3), wrote a letter dated April 12, 2000, to express their concerns with potential problems caused by an ecosystem restoration project at HCDD3. Their concerns are that the newly flooded areas would lose their trees and vegetation from flooding, would increase erosion against a new set-back levee, would increase pumping costs for the drainage district, and would increase the size of the existing deer herd. **Response:** This Environmental Assessment addresses impacts associated with placement sites for the Oquawka Reach dredge cut, and does not address any potential future ecosystem

restoration project at HCDD3. If an ecosystem restoration project is initiated within the HCDD3, the District will coordinate further with the HCDD3 and all landowners affected by the project.

The Illinois Department of Natural Resources, Office of Water Resources, responded by letters dated October 25, 2000, and November 16, 2000, to coordination letters dated September 12, 2000, and November 6, 2000, stating that the proposed placement sites are behind existing levees and therefore out of the river “floodway” and that the dredging activities would comply with our existing Permit No. 17603.

The U.S. Environmental Protection Agency responded by letter dated October 27, 2000, to a coordination letter dated September 12, 2000, providing two website addresses that the EPA encourages the Corps of Engineers to utilize during preparation of the Environmental Assessment.

The Illinois Department of Natural Resources, Office of Realty and Environmental Planning, responded by letter dated October 30, 2000, and December 8, 2000, to coordination letters dated September 12, 2000, and November 6, 2000, stating that the Department strongly supports the proposed 204 project for the Henderson 3 Levee and Drainage District, that there are no records of threatened/endangered species or natural areas in the placement sites, and that a wetland delineation be done at Site 8 to evaluate a drainage ditch. **Response:** A wetland delineation was performed at Site 8 on June 11, 2001. All wetland impacts at Site 8 would be avoided, and the 0.1 acre of wetland impacts for the access area between Sites 5 and 8 would be mitigated. A mussel survey was performed by Illinois DNR and District staffs on September 24, 2001, adjacent to Site 5 to determine the most suitable location for shore pipe access into Site 5 and then on to Site 8. There was a consensus that the upstream side of Site 5 be used for shore pipe access, and that area is in line with the location of the access area between Sites 5 and 8.

George Hennenfent, Hattery, Simpson, West, attorney for Howard Pruett, wrote a letter dated April 27, 2001, to express his client’s reluctance to allow dredged material to be placed where proposed on his property. He proposed an alternative placement site along the land side of the levee that borders his property. He also submitted a list of questions concerning the placement site construction proposal. **Response:** Patricia Dice, from the Rock Island District’s Real Estate Division, responded to Mr. Hennenfent’s questions in a letter dated May 22, 2001. Her letter also stated that the District would consider alternate placement sites that are environmentally feasible and cost effective. This evaluation has been done, and the proposed placement Site 8 is considered to be the most environmentally feasible and cost effective placement site location in the vicinity.

The Illinois Historic Preservation Agency responded by letter dated December 31, 2001 (responding to a District coordination letter dated December 5, 2001) agreeing with the District’s opinion that the historic properties 11HE433 and 434 were not eligible for the National Register of Historic Places and that 11HE435 was eligible, but that the “avoidance plan for 11HE435, as described in the documentation you submitted, is adequate to avoid effects to this potentially eligible site.”

The Natural Resources Conservation Service submitted a letter dated January 29, 2002, to provide a preliminary wetland determination on the potential wetland mitigation site property for Corps of Engineers purposes only. The landowner has not requested an official wetland determination for Food Security Act purposes. This preliminary wetland determination identified the entire potential wetland mitigation site as Prior Converted Cropland.

The U.S. Fish and Wildlife Service responded by letter dated February 14, 2002, to coordination letters dated September 12, 2000, November 6, 2000, and August 17, 2001, stating that three

federally threatened and endangered species—the Bald Eagle, the Higgins' Eye Pearly Mussel, and the Indiana Bat—occur in the same counties as the placement sites, but that the placement sites are not likely to adversely affect these species. The letter also states that the Fish and Wildlife Service understands that wetlands would be impacted at the placement sites, and would like to be involved in the review of the compensatory mitigation plan.

The Iowa Department of Natural Resources submitted a letter dated May 23, 2002, to state that they have no objections to the addition of Site 8 to the Oquawka Reach dredged material placement site plan. The letter also states that if wetlands are found, a mitigation plan will be needed.

Response: Site 8 was designed to avoid wetlands, although approximately 0.1 acre of wetlands will be impacted to create an access area to Site 8 from the river. This wetland loss will be mitigated in accordance with the attached mitigation plan in EA Appendix C.

FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT FOR THE OQUAWKA REACH: LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS UPPER MISSISSIPPI RIVER MILES 411.0-415.2

I have reviewed the information in this Environmental Assessment, along with data obtained from Federal and State agencies having jurisdiction by law or special expertise, and from the interested public. I find that the placement of dredged material in three new sites—one floodplain agricultural site, one floodplain non-agricultural site, and one upland levee placement—would not significantly affect the quality of the human environment. Therefore, it is my determination that an EIS (Environmental Impact Statement) is not required. This determination will be reevaluated if warranted by later developments.

Alternatives considered along with the preferred action were:

- No Project
- No Change
- Floodplain
- Bankline
- Upland
- Thalweg

Factors considered in making the determination that an EIS was not required are as follows:

- a. Implementation of the project, as proposed, represents the least environmentally damaging alternative, with acceptable mitigation for lost wetland functions and values from the use of Sites 3, 5, and 8.
- b. The proposed project would not significantly affect water quality of the Mississippi River or cultural/historic resources.
- c. The proposed project would have no effect on federally or state listed endangered or threatened species.
- d. Impacts of farmland conversion to non-agricultural uses have been considered. Measures to avoid and/or minimize effects of farmland conversion have been considered. The project, as proposed, would not constitute an unnecessary or frivolous conversion of farmland.
- e. The implementation of the project as proposed would not result in increases in cost or prices for consumers, individual industries, and Federal, State, or local government agencies, nor would it impair, in any way, the ability of the U.S. to compete with foreign-based enterprises in domestic or export markets.
- f. The preferred alternative provides the best long-term solution to the dredging problems at these chronic dredge cuts. The preferred alternative has been identified as the Base Plan (Federal Standard).
- g. The proposed project has identified and taken into account cumulative impacts and would not exceed any known biological or social threshold.

Date

William J. Bayles
Colonel, U.S. Army
District Engineer

EA APPENDIX A
PERTINENT CORRESPONDENCE

**DREDGED MATERIAL PLACEMENT SITE FOR OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0-415.2**

**EA APPENDIX A
PERTINENT CORRESPONDENCE**

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DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

October 6, 1999

REPLY TO
ATTENTION OF
Planning, Programs and
Project Management Division

SEE DISTRIBUTION LIST

The Rock Island District of the U.S. Army Corps of Engineers (Corps) has enclosed the information concerning the alternatives for potential dredged material placement sites at the Keithsburg Upper, Oquawka/Furnald Island, Lock 18 Upper Dredge Cuts. The dredge cuts are located on the Mississippi River, Pool 18, River Miles 426.8-427.5, 414.7-415.2, and 411.0-412.4.

This information describes possible placement sites being considered by the Rock Island District to form alternatives for the Dredged Material Management Plans for the above dredge cuts. The On-Site Inspection Team (OSIT) members are encouraged to review this information and add any other potential dredged material placement sites or sites where dredged material can be used for beneficial use or for ecosystem restoration.

Dr. Craig Chumbley or another representative from RUST Environment & Infrastructures Inc. will be contacting you soon to set up a meeting to discuss and finalize the alternatives for the Dredged Material Management Plans. We are estimating that this meeting will require a day at the office and site visits if needed.

If you have any questions, please call Mr. Fred Hanshaw of our Project Management Branch at 309/794-5342, or write to our address above, ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw).

Sincerely,

ORIGINAL SIGNED BY
Mark C. Schroeder for
Darryl R. Carattini
Chief, Project Management Branch

Enclosures



REPLY TO
ATTENTION OF
Planning, Programs and
Project Management Division

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
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ROCK ISLAND, ILLINOIS 61204-2004

December 13, 1999

SEE DISTRIBUTION LIST

The Rock Island District of the U.S. Army Corps of Engineers (Corps) has enclosed the meeting minutes concerning the alternatives for potential dredged material placement sites at the Keithsburg Upper, Oquawka/Furnald Island, Lock 18 Upper Dredge Cuts. The dredge cuts are located on the Mississippi River, Pool 18, River Miles 426.8-427.5, 414.7-415.2, and 411.0-412.4.

This information describes possible placement sites being considered by the Rock Island District to form alternatives for the Dredged Material Management Plans for the above dredge cuts.

If you have any questions, please contact Mr. Fred Hanshaw of our Project Management Branch, telephone 309/794-5342, or write to our address above, ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw).

Sincerely,

ORIGINAL SIGNED BY

Darryl R. Carattini
Chief, Project Management Branch

Enclosure

**DISTRIBUTION LIST
FOR
KEITHSBURG UPPER, OQUAWKA/FURNALD ISLAND/LOCK 18
MISSISSIPPI RIVER POOL 18
DREDGED MATERIAL MANAGEMENT PLANS**

Ms. Vicki Stoller
Administrator
Two Rivers Levee & Drainage Association
5601 - 205th Street
Mediapolis, IA 5263

Mr. Curtis F. Pflum
Commissioner
R.R. 2
Burlington, IA 52601

Mr. Mike Hinson
Commissioner
20635 Highway 99
Mediapolis, IA 5263

Mr. Wayne Shipman
Commissioner
Oakville, IA 52646

Mr. Crafton Meeker
Commissioner
5597 - 205th Street
Mediapolis, IA 52637

Mr. Curtis Frank
Commissioner
Oakville, IA 52646

Mr. Steve Mullahy
Commissioner
17274 - 40th Avenue
Burlington, IA 52601

Mr. Mike Griffin
Iowa Department of Natural Resources
206 Rose Street
Bellevue, IA 52031

Mr. Bernard Schonhoff
Iowa Department of Natural Resources
Fairport Fish Hatchery
Route 3, Box 434
Muscatine, IA 52761

Mr. Bill Ohde
Wildlife Biologist
Iowa Department of Natural Resources
ASCS Office Building
515 Townsend Avenue
Wapello, IA 52653

Mr. Dan Sallee
Illinois Department of Natural Resources
P.O. Box 149
Aledo, IL 61231

Mr. Kevin Oller
Illinois Department of Natural Resources
P.O. Box 149
Aledo, IL 61231

Mr. Bob Clevensine
U.S. Department of the Interior
U.S. Fish & Wildlife Service
4469 - 48th Avenue Court
Rock Island, IL 61201

Ms. Karen Westphall
U.S. Department of the Interior
U.S. Fish & Wildlife Service
Mark Twain NWR
1704 North 24th Street
Quincy, IL 62301

Ms. Kathleen Maycroft
District Manager
Mark Twain NWR
Wapello District
10728 County Road X61
Wapello, IA 52653

Mr. Al Fenedick
USEPA, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

DISTRIBUTION LIST (Continued)

Ms. Diana Hershberger
U.S. Environmental Protection Agency
Region 7
Water Resource Protection Branch
726 Minnesota Avenue
Kansas City, KS 66101

Mr. John Robb
Henderson County DD 3
Rt 1, Box 25A
Gladstone, IL 61437

Mr. Howard Pruett
Henderson County DD 3
Rt 1, Box 25A
Gladstone, IL 61437

Mr. Robert Munson
Henderson County DD 3
Rt 1, Box 25A
Gladstone, IL 61437



REPLY TO
ATTENTION OF:

Planning, Programs, and
Project Management Division

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

December 21, 1999

Mr. James Garner *Not Subject to Review*
Illinois Department of Natural Resources
524 South Second Street
Springfield, Illinois 62701-1787

Dear Mr. Garner:

The Rock Island District of the U.S. Army Corps of Engineers (Corps) is initiating development of a long-term Dredged Material Management Plan (DMMP) for dredged material placement near the Oquawka, Illinois, area. The Corps is working with various State and Federal resource and regulatory agencies to address the need for environmentally acceptable, long-term solutions for dredged material placement. This proposed site near Oquawka might be a candidate for a Section 204 project. Section 204 of the Water Resources Development Act of 1992 authorizes the Corps to beneficially use dredged material for ecosystem restoration. The goal of this program is to protect, restore, and create aquatic and ecologically related habitats. The Section 204 program requires a non-Federal sponsor to cost share 25 percent of the project cost above the base plan. Maintenance of the project will be 100-percent non-Federal.

The Illinois Department of Natural Resources' (IL DNR) Open Lands Trust Initiative (OLTI) has become a topic of discussion during our investigation into potential dredged material placement sites.

The Henderson 3 Levee and Drainage District is located just south of Oquawka and north of Lock & Dam 18. Within this levee district is a section of land that contains more than 100 acres of bottomland hardwoods, wetlands, and sloughs (see Enclosure 1). One proposal for the Oquawka DMMP includes the construction of a setback levee located on the landward side of the wetland area. This proposed setback levee could be constructed from dredged material.

Setting the Henderson 3 flood control levee behind the wetland will open this sensitive area to the river (after notching the downstream portion of the existing levee). This will also benefit floodplain management by increasing the cross-sectional area of this portion of the river. In addition, the levee district has indicated willingness to discuss this proposal; however, they are unable to donate the affected land. This precludes the Corps from evaluating this site as part of the DMMP base plan, as other less expensive sites are available for dredged material placement. The Section 204 program would allow a local sponsor to cost share the additional cost of using and developing the site.

Within the Section 204 program, land acquisition costs are creditable toward the non-Federal sponsors cost-share requirements. If the cost of the land acquisition exceeds the 25 percent of the cost-share credit, the sponsor may be refunded the difference. This option, if used by the IL DNR, could leverage OLTJ funds within the state.

Please consider the possibility of the proposal outlined herein. We would like to meet with you to discuss this project potential in more detail. We are anxious to learn more about the OLTJ. Perhaps our agencies could partner using the OLTJ and Section 204 programs at this and other locations along the Mississippi and Illinois Rivers.

If you have any questions regarding the Section 204 program, please contact Ms. Dorene Bollman of our Environmental Analysis Branch, telephone 309/794-5590. You also may write to our address above, ATTN: Planning, Programs, and Project Management Division (Dorene Bollman).

Thank you for your consideration and cooperation.

Sincerely,

ORIGINAL SIGNED BY

Darryl R. Carattini
Chief, Project Management Branch

Enclosure

Copies Furnished:

Mr. Tom Flattery
Illinois Department of Natural Resources
524 South Second Street
Springfield, Illinois 62701-1787 (with enclosure)

Mr. Carl Becker
Illinois Department of Natural Resources
524 South Second Street
Springfield, Illinois 62701-1787 (with enclosure)

HENDERSON COUNTY DD
Rt 1 Box 25A
Gladstone, Illinois 61437
309-627-2827 & fax

April 12, 2000

Colonel James V. Mudd, Commander
USACOE/RI
Clock Tower
P.O. Box 2004
Rock Island, IL 61204-2004

ref: 1) L:\WORK\project\29651\eng\Dredge\Pool 18\Pool 18 Meeting Minutes.doc

Dear Sir:

During a meeting at the Two Rivers Levee and Drainage District Office and an on-site visit to Henderson County Drainage District 3 in October, 1999, the Dredge Maintenance Team proposed a 204 project levee set back for the HCDD3 river levee, (ref 1).

At first look this proposal has some attractive possibilities, for the Corps, a close-by dredge disposal site and a means of repair of the HCDD3 main river levee which has been badly damaged by continuous wave wash since establishment of the navigation pool. And, for HCDD3, restoration of flood protection afforded by a well maintained levee. However, a set back would not stop wave wash erosion and would cause some considerable new problems:

1) The wooded area on the river side of the set-back is at 525 to 522 elevation, which is 3 to 6 feet below flat pool elevation of 528. The entire area would be flooded by 3 to 6 feet of seep water from the navigation pool, at all times. If a pumping station was not installed and operated continuously, all trees and vegetation would die within 2 years.

2) The newly created lake would be unprotected and generate substantial waves, and, as the old levee eroded away, wave wash would increase and erode away the new set-back levee.

3) The new set-back levee created lake, unless continuously pumped, would simply move the navigation pool further out into HCDD3, increase land damage by raising the water table on additional land and increase our pumping cost.

4) If the new refuge area is pumped (maintained in its present condition), this addition to the already existing refuge immediately down stream would increase the already substantial deer herd and overwhelm agricultural production in our very small district. The increased size of the refuge would be grossly out of balance with the adjacent crop land.

HCDD3 cannot offer any cost sharing. HCDD3 is presently paying \$30 per acre drainage taxes, because Pool 19 blocks our outlet drain, continuously. The burden of pumping all of the additional seepage from Pool 18 for the past 40 years has forced the raising of our drainage taxes beyond the limit the land will bear.

In order to consider this conceptual proposal, HCDD3 needs additional information:

- 1) Plan and cross section views of the set back levee.
- 2) Project schedule of milestone dates including conceptual planning, design, right-away, material placements, final placement closure and turn over of completed project to drainage district.
- 3) Order of magnitude cost estimate and local sponsor share and responsibilities.
- 4) Construction access, project right-away requirements and permanent access including parties to be granted access.
- 5) Additional drainage and /or modification of existing drainage system.
- 6) Any other information the Corps feels is needed by the drainage district.

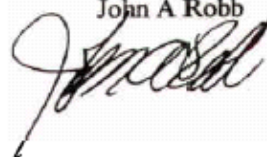
HCDD3 will assist the Corps in any way we can in the consideration of this conceptual plan. However, HCDD3 remains of the opinion that the best site for placement of channel maintenance dredge material is along the entire length of our existing River Levee.

Sincerely,
HCDD3 Commissioners



Howard Pruett

John A Robb





DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

July 5, 2000

REPLY TO
ATTENTION OF:

Planning, Programs, and
Project Management Division

Mr. Howard Pruett and Mr. John A. Robb
Henderson County Drainage District 3
Route 1, Box 25A
Gladstone, Illinois 61437

Dear Mr. Pruett and Mr. Robb:

I am writing in response to your letter dated April 12, 2000, concerning a Section 204 proposal for the Henderson County Drainage District 3.

Thank you for your comments about the problems that you anticipate based on the proposal. Because of the project's uncertainty, we are unable to answer many of the questions which you raised at this time. We have not yet identified a cost-share sponsor or completed any specific project design, scheduling, or cost estimating. Under the Section 204 program, the total project cost share is 75-percent Federal/25-percent non-Federal.

If and when a cost-share sponsor is identified, we will be able to proceed with project planning, and we will consult with you. Until that time, all proposals are very conceptual and likely to be modified.

Thank you again for your letter. We will coordinate with you if a project develops at any time in the future. If you would like further information about the Section 204 program, please call Ms. Dorene Bollman of our Environmental Analysis Section, telephone 309/794-5590.

Sincerely,

Leo F. Foley, P.E.
Project Manager



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

August 31, 2000

Planning, Programs, and
Project Management Division

SEE DISTRIBUTION LIST

The Rock Island District of the U.S. Army Corps of Engineers (Corps) is developing a long-term plan for the placement of dredged material in the vicinity of your property from the Oquawka Reach (Oquawka, Furnald Island, and Lock 18) and Benton Island Dredge Cuts (see proposed placement sites on attached maps). The Corps is working with various State and Federal resource and regulatory agencies to address the need for environmentally acceptable, long-term solutions for dredged material placement.

The Corps is responsible for the maintenance of the Mississippi River navigation channel. Federal laws mandate this responsibility. Maintenance of the commercial navigation channel includes periodic dredging. Dredging is the removal of material, clean sand, from shallow areas to maintain the 2.75-meter (9-foot) navigation channel. As a nearby landowner, you are being contacted as part of our investigation into potential dredged material placement sites.

Increased environmental awareness has resulted in a closer look at our dredged material placement methods. Bankline placement in most cases is not considered an acceptable alternative for the long term. Additionally, new regulations require the Corps to develop long-term alternatives for dredged material placement.

The Corps must visit those lands of any potential dredged material placement site to evaluate the site appropriateness. We would appreciate it if you would consider signing a Right-of-Entry that will allow the Corps to accomplish the necessary investigations. A representative of our Real Estate Division will be contacting you soon to discuss the Right-of-Entry with you.

The results of these site evaluation efforts will be documented in an Environmental Assessment of the placement site, which will then be distributed for review. During this planning phase, we will keep you informed of the project plans and design. We will also be conducting a public meeting for all landowners who may possibly be affected by this project, so that they may receive information and ask questions.

Please be aware that this project is in the very early stages of planning. If you have any questions regarding this project, please contact Mr. Fred Hanshaw of our Project Management Branch. Mr. Hanshaw may be reached by calling 309/794-5342, or by writing to our address above, ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw).

Sincerely,

ORIGINAL SIGNED BY

Darryl R. Carattini
Chief, Project Management Branch

Attachments

OQUAWKA Dredged Material Management Plan – List of Landowners

Henderson County

City of Galesburg
55 West Tomkins Street
Galesburg, IL 61204-1387

Howard D. & Rosalie Pruett
RR 1
Gladstone, IL 61437

Robert & Courtney Munson
RR 1, Box 803
Monmouth, IL 61462

Glenn J. Romkey Trust
c/o Firststar Bank
PO Box 2519
Cedar Rapids, IA 52406

Robert L. Gray
RR 1, Box 216
Gladstone, IL 61437

Henderson County Drainage District
c/o Howard Pruett
RR 1
Gladstone, IL 61437

Allen L. & Lois M. Tee
1988 North 1250 East
Oquawka, IL 61469

Richmond Farms
c/o Larry Spears
201 West Broadway
Monmouth, IL 61462

John A. & Barbara Robb
RR 1, Box 25A
Gladstone, IL 61437

Earle & Ida Maxine Kloster
RR 1
Oquawka, IL 61469

Douglas F. Steward
2737 Bittersweet Place
Burlington, IA 52601

Burlington, Northern Santa Fe Railroad
(formerly Chicago, Burlington, & Quincy RR)
1670 South Henderson
Galesburg, IL 61401

Des Moines County

Paul & Ruth Luttenegger
2841 – 190th Street
Burlington, IA 52601

Michael & Christa Poggemiller
18765 – 22nd Avenue
Burlington, IA 52601

Kristina Lumbeck
PO Box 621
Oquawka, IL 61469

Morris Duval
18707 – 22nd Avenue
Burlington, IA 52601

Leslie & Shirley Friedel
11271 Cliff Road
Burlington, IA 52601

DeWayne & Margaret Poggemiller
18739 - 22nd Avenue
Burlington, IA 52601

Robert & Virginia Orton
1605 South 6th Street
Burlington, IA 52601

Walter Duval
18707 – 22nd Avenue
Burlington, IA 52601

Willard & Mary Ann Elliott
Wever, IA 52658

Des Moines County (Continued)

Kenneth Friedel
15503 Mediapolis Road
Mediapolis, IA 52637

Des Moines County
513 North Main Street
Burlington, IA 52601

Orville & Shirley Pence
18265 – 20th Avenue
Burlington, IA 52601

Charles & Janice Friedel
18139 – 20th Avenue
Burlington, IA 52601

Ray W. Richardson
2024 – 180th Street
Burlington, IA 52601

Dean & Elizabeth Weinreich
1879 - 180th Street
Burlington, IA 52601

Jack & Janice Dahlsten
2241 – 180th Street
Burlington, IA 52601

Delores Roberts Trust
RR 2, Box 201
Burlington, IA 52601

Elwood Campbell
18081 - 20th Ave.
Burlington, IA 52601

Ronald & Wanda Campbell
3298 – 170th Street
Burlington, IA 52601

Gordon & Janet Clubb
3179 – 170th Street
Burlington, IA 52601

H & D Land Company
RR 2
Burlington, IA 52601

Phyllis Distelhorst
812 Randall Lane
Burlington, IA 52601

James & Patty Russell
RR 1, Box 42A
Yarmouth, IA 52660

Kelvin & Debra Fuhrer
RR 2, Box 208A
Burlington, IA 52601

Elwood & Janet Campbell
18081 – 20th Avenue
Burlington, IA 52601

William R. & Martha Fried
20395 Hwy 99
Mediapolis, IA 52637

Larry Reighard
1875 – 180th Street
Burlington, IA 52601

Frank & Mildred Dahlsten
2003 – 180th Street
Burlington, IA 52601

Marlin Campbell
16939 Highway 99
Burlington, IA 52601

William M. H. Fichtorn & Juanita Erickson
4305 – 170th Street
Burlington, IA 52601

Milton & Francis Oetken
16272 - 45th Avenue
Burlington, IA 52601

Farmers & Merchants Bank & Trust
Distelhorst Family Trust
1600 Osborn Street
Burlington, IA 52601

Lafe Martin
15672 – 50th Avenue
Burlington, IA 52601

Carl & Gladys Schulz, Revocable Trust
4279 – 160th Street
Burlington, IA 52601

Harry G. & Joyce E. Schrader
5305 – 150th Street
Burlington, IA 52601

Des Moines County (Continued)

Iowa River Flint Creek Levee District # 16
5601 - 205th Street
Mediapolis, IA 52637

Des Moines County Drainage District
5094 - 150th Street
Burlington, IA 52601

Wade & Barbara Wiese
5162 - 150th Street
Burlington, IA 52601

Helen Jack
629 McKinley Avenue
Burlington, IA 52601

Larry & Debra Burr
4491 - 160th Street
Burlington, IA 52601

Sarah DeLaby
c/o Walter Duval
18707 - 22nd Avenue
Burlington, IA 52601

Jonathon & Linda Luttenegger
2993 - 190th Street
Burlington, IA 52501

George & Michelle Hammje
2125 Summer Street
Burlington, IA 52601

Ronnie & Nancy Gilliland
4723 - 160th Street
Burlington, IA 52601

Floyd Duval
710 - 8th Avenue North
Mount Vernon, IA 52314

Donald & Betty Distelhorst
16278 - 45th Avenue
Burlington, IA 52601

Alice Mullahy
17672 - 40th Avenue
Burlington, IA 52601

Patrick Mullahy
3636 - 170th Street
Burlington, IA 52601

Virginia Orton
1605 South 6th Street
Burlington, IA 52601

Illinois Department of Natural Resources

Mr. Robert Schanzle
Illinois Department of Natural Resources
Division of Water Resources
Review and Coordination
524 South Second Street
Springfield, IL 62701-1787

Mr. Dennis Kennedy
Illinois Department of Natural Resources
Office of Water Resources
Lincoln Tower Plaza
524 South Second Street
Springfield, IL 62701-1787

Mr. Marvin Hubbell
Illinois Department of Natural Resources
Office of Water Resources
Lincoln Tower Plaza
524 South Second Street
Springfield, IL 62701-1787

Mr. Dan Sallee
Illinois Department of Natural Resources
PO Box 149
Aledo, IL 61231



REPLY TO
ATTENTION OF

Planning, Programs, and
Project Management Division

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

September 12, 2000

SEE DISTRIBUTION LIST

The Rock Island District of the U.S. Army Corps of Engineers (Corps) has enclosed a copy of the information concerning the final alternative for potential dredged material placement sites for the Oquawka Reach (Oquawka, Furnald Island, and Lock 18 Upper) Dredge Cuts, Pool 18, Mississippi River Miles 411.0-415.2; Benton Island Dredge Cut; and a potential Section 204 project (habitat restoration using dredged material) (see enclosed map, Enclosure 1 – Figure 1).

This information describes the alternative being considered by the Corps for the Oquawka Reach Dredged Material Management Plan (Enclosures 1 & 2) and an addition to the Benton Island Dredged Material Management Plan (Enclosure 3). This alternative was formulated during the combined office and on-site meeting held last fall for the Oquawka Reach Dredge Cuts with Federal and State environmental agencies. The Corps is coordinating with applicable State and Federal agencies to evaluate the alternative.

The Corps plans to prepare a Dredged Material Management Plan, including an Environmental Assessment and a 404 Evaluation, for these newly proposed placement sites. The Corps is also in the initial scoping phase for a potential Section 204 project within the Henderson 3 Levee and Drainage District (Enclosure 4). It is not known at this time if the Corps will formally pursue a Section 204 project at this location. Any future activities involving modifications to the proposed Dredged Material Management Plan, including a Section 204 project, would be fully coordinated with applicable Federal and State agencies.

At this time, we would like to identify any existing significant resources or other environmental concerns associated with these sites, such as endangered or threatened species, wetlands, known land-use plans, including Federal or State long-term contract obligations, Hazardous Toxic & Radioactive Waste concerns, and floodplain issues, such as potential loss of floodplain storage and potential impedance of flows, etc. Enclosures 1, 2, 3, and 4 contain detailed information on the proposed plan to assist your evaluation. Please provide us with any other potential placement sites you believe we may not have considered, and any reports, studies, or other research concerning environmental resources in the project vicinity that may be of use in analyzing potential impacts of the project.

In addition, please provide us with any potential environmental restoration concepts that may fall under Section 1135 or Section 204 program authorities. These programs are authorized by the Water Resources Development Act (as amended) and require a non-Federal sponsor to cost share a percentage of project costs (details of the cost share vary between these programs). The Section 1135 program focuses on environmental quality improvements at water resources projects constructed by the Corps, which are feasible and consistent with authorized project purposes. The Section 204 program authorizes the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging activities at an authorized Federal navigation project. We are interested in pursuing restoration ideas relative to these programs as we execute our channel maintenance responsibilities. Your ideas are appreciated.

Please forward all comments within 30 days of the date of this letter to Mr. Fred Hanshaw of our Project Management Branch at our address above, ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw).

Sincerely,

ORIGINAL SIGNED BY

Darryl R. Carattini
Chief, Project Management Branch

Enclosures

**DISTRIBUTION LIST
FOR THE OQUAWKA REACH
DREDGED MATERIAL MANAGEMENT PLAN**

Ms. Vicki Stoller
Administrator
Two Rivers Levee & Drainage Association
5601 - 205th Street
Mediapolis, IA 52637

Curtis F. Pflum
Commissioner
R.R. 2
Burlington, IA 52601

Mr. Mike Hinson
Commissioner
20635 Highway 99
Mediapolis, IA 52637

Mr. Wayne Shipman
Commissioner
Oakville, IA 52646

Mr. Crafton Meeker
Commissioner
5597 - 205th Street
Mediapolis, IA 52637

Mr. Curtis Frank
Commissioner
Oakville, IA 52646

Mr. Steve Mullahy
Commissioner
17274 - 40th Avenue
Burlington, IA 52601

Mr. John Robb
Henderson County Drainage District 3
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Gladstone, Illinois 61437

Mr. Howard Pruett
Henderson County Drainage District 3
Rt 1, Box 25 A
Gladstone, Illinois 61437

Mr. Robert Munson
Henderson County Drainage District 3
Rt 1, Box 25 A
Gladstone, Illinois 61437

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Mr. Bob Schanzle
Illinois Department of Natural Resources
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Mr. Dennis Kennedy
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Office of Water Resources
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Illinois Department of Natural Resources
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Mr. Kevin Oller
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Mr. Thomas Skinner
Director
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Mr. Bruce Yurdin
Illinois Environmental Protection Agency
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Springfield, IL 62794

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Illinois Department of Agriculture
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Iowa Department of Natural Resources
Wallace State Office Building
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Des Moines, IA 50319-0034

Ms. Christine Schwauke
Iowa Department of Natural Resources
Wallace State Office Building
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Mr. Mike Griffin
Iowa Department of Natural Resources
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Bellevue, IA 52031

Mr. Bernard Schonhoff
Iowa Department of Natural Resources
Fairport Fish Hatchery
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Mr. Bill Ohde
Wildlife Biologist
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Wapello, IA 52653

Mr. Bob Clevensine
U.S. Department of the Interior
U.S. Fish & Wildlife Service
4469 - 48th Avenue Court
Rock Island, IL 61201

Ms. Karen Westphall
U.S. Department of the Interior
U.S. Fish & Wildlife Service
Mark Twain National Wildlife Refuge
1704 North 24th Street
Quincy, IL 62301

Ms. Kathleen Maycroft
District Manager
Mark Twain National Wildlife Refuge
Wapello District
10728 County Road X61
Wapello, IA 52653

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77 West Jackson Boulevard
Chicago, IL 60604-3590

Mr. Bill Franz
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Mr. Al Fenedick
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Mr. Dennis Grams
Regional Administrator
U.S. Environmental Protection Agency
Region 7
901 North 5th Street
Kansas City, KS 66101

Mr. Joe Cothem
U.S. Environmental Protection Agency
Region 7
Water Resource Protection Branch
901 North 5th Street
Kansas City, KS 66101

Executive Director
Illinois Corn Growers Association
P.O. Box 1623
Bloomington, IL 61702

Executive Director
Iowa Corn Growers Association
1200 - 35th Street, Suite 306
West Des Moines, IA 50226

DISTRIBUTION LIST (Continued)

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Cultural Resource Management Consultant
Citizen Potawatomi Nation
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Shawnee, OK 74801

Ms. Clarice M. Werle
Project Coordinator/Research Supervisor
Forest County Potawatomi Community
P.O. Box 340
Crandon, WI 54520

CDR Adolpho Ramirez
Commanding Officer
Marine Safety Office
U.S. Coast Guard, 8th District
1222 Spruce Street, Suite 1215
St. Louis, MO 63103-2385

Ms. Gail Neumeyer
Director
Region 7 Division of Soil Conservation
4646 Spencer Grove Road
Walker, IA 52352

Mr. Don Avery
Director
Region 9 Division of Soil Conservation
6552 - 110th Avenue
Ottumwa, IA 52501-9193

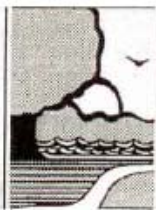
Mr. Bruce W. Trautman
Area 5 Conservationist
Natural Resources Conservation Service
1805 West Jefferson Avenue, Suite 2
Fairfield, IA 52556-4236

Ms. Consuelo Ramirez
District Conservationist
Natural Resources Conservation Service
Wapello Field Office
514 Isett Street
Wapello, IA 52653-1225

Mr. L. Robert Dean
Assistant State Conservationist
IL Natural Resources Conservation Service
District 4
233 South. Soangetaha Road
Galesburg, IL 61480

Ms. Cathy Olsan
District Conservationist
Henderson County SWCD
323 East Main
P.O. Box 485
Stronghurst, IL 61480

Mr. Jason Hessman
District Conservationist
Mercer County SWCD
308 SE. 8th Avenue
Aledo, IL 61231



ILLINOIS
DEPARTMENT OF
NATURAL RESOURCES
Office of Water Resources

524 South Second Street, Springfield 62701-1787

George H. Ryan, Governor ● Brent Manning, Director

October 25, 2000

SUBJECT: Dredged Material Placement
Oquawka Reach Dredge Cuts
Mississippi River Miles 411.0-415.2

Mr. Fred Hanshaw
U.S. Army Corps of Engineers
Rock Island District
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

ATTENTION: Planning, Programs, and Project Management Division

Dear Mr. Hanshaw:

Thank you for your September 12, 2000 request for our input concerning the alternatives being considered for potential dredged material placement sites in the Oquawka reach.

The proposed alternative includes seven placement sites, all of which are behind existing levees. Provided that the dredged material will not be used to raise the design elevation of the levees, the proposed placement sites will be considered to be outside of the river "floodway" and the dredging activities will comply with your Illinois Department of Natural Resources, Office of Water Resources Permit No. 17603.

Thank you for providing us with the opportunity to review the proposal. Please feel free to contact Mike Diedrichsen of my staff at 217/782-3863 if you have any questions or comments.

Sincerely,

Dennis L. Kennedy, P.E.
Senior Water Resources Engineer

DLK:MLD:crw

cc: IDNR/OREP (Robert Schanzle)

[printed on recycled and recyclable paper]



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

OCT 27 2000

Darryl R. Carattini *10/31*
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

SUBJECT: Okuawka Reach Dredge Cuts, Pool 18, Mississippi River Miles 411.0-415.2;
Benton Island Dredge Cut; potential Section 204 project

Dear Mr. Carattini:

This is to inform you that EPA has received your letter dated September 12, 2000 concerning the dredging development project mentioned above.

Thank you for keeping us informed early on the proposed project. Your letter suggests that you will be preparing an Environmental Assessment in the near future; we hope to have the opportunity to comment on that document as well.

The U.S. EPA has a great deal of catalogued information that may be of use in preparing the Environmental Assessment. On the world wide web,

<http://www.epa.gov/surf3/locate/index.html>

is a web site of environmental information organized by watershed.

http://www.epa.gov/enviro/index_java.html

Is a web site containing extensive information collected by the U.S. EPA from most departments within the Agency, including hazardous waste sites, superfund sites, toxic release and water discharge permits, and others. We encourage you to access the above sites during the preparation of the Environmental Assessment.

Again, thank you for the opportunity to comment on this project. If you have any questions or require further technical assistance you may contact Stephen Smith of my staff at 913-551-7656.

Sincerely,

Joseph E. Cothorn
Joseph E. Cothorn

NEPA Team Leader
U.S. EPA, Region VII





ILLINOIS
DEPARTMENT OF
NATURAL RESOURCES

524 South Second Street, Springfield 62701-1787

George H. Ryan, Governor • Brent Manning, Director

October 30, 2000

Mr. Darryl R. Carattini *RWC 11/27*
Chief, Project Management Branch
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Mr. Carattini:

Reference is made to your agency's letter of September 12, 2000 transmitting the final alternative for dredged material placement sites for the Oquawka Reach (Oquawka, Furnald Island, and Lock 18 Upper) Dredge Cuts, the Benton Island Dredge Cut, and a potential Section 204 project, all located in Pool 18 between Mississippi River miles 411.0 and 416.0, in Des Moines County, Iowa, and Henderson County, Illinois.

The various placement sites have all been thoroughly discussed and coordinated between the Rock Island District and the participating state and federal resource agencies. The Department has no additional comments regarding sensitive species or habitats at this time. We strongly support the proposed 204 project for the Henderson 3 Levee and Drainage District, which will beneficially utilize dredged material for the creation of habitat improvements.

Thank you for the opportunity to comment. Please contact me at 217-785-4863 if we can be of further assistance.

Sincerely,

Robert W. Schanzle
Permit Program Manager
Office of Realty and Environmental Planning

RWS:rs

cc: IDNR/OWR (Kennedy), IEPA (Yurdin), IDOA (Savko), IADNR (Szcodronski),
USFWS (Clevenstine), USEPA (Pierard)

[printed on recycled and recyclable paper]



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

November 6, 2000

Planning, Programs, and
Project Management Division

SEE DISTRIBUTION LIST

The Rock Island District of the U.S. Army Corps of Engineers has added Site 8 to the final alternative for potential dredged material placement sites for the Oquawka Reach (Oquawka, Furnald Island, and Lock 18 Upper Dredge Cuts, Pool 18, Mississippi River Miles 411.0-415.2 (see attached map).

This alternative was formulated subsequent to the combined office and on-site meeting held last fall for the Oquawka Reach Dredge Cuts with the Federal and State environmental agencies. The Rock Island District is reCOORDINATING with applicable State and Federal agencies to evaluate this alternative in the Dredged Material Management Plan, including an Environmental Assessment and a Section 404 Evaluation. This site is being proposed at this time to evaluate the baseline condition for a potential Section 204 project within the Henderson 3 Levee and Drainage District. It is still not known at this time if the District will formally pursue this Section 204. Any future activities involving modifications to this amended Dredged Material Management Plan, including a Section 204 project, would be fully coordinated.

At this time, we would like to identify any existing significant resources or other environmental concerns associated with Site 8 and the access area adjacent to Site 8, such as endangered or threatened species, wetlands, known land use plans, including Federal or State long-term contract obligations, Hazardous Toxic & Radioactive Waste concerns and floodplain issues, such as potential loss of floodplain storage and potential impedance of flows, etc. Please inform us of any reports, studies, or other research concerning environmental resources in the project vicinity that may be of use in analyzing potential impacts of the project.

Please forward all comments within 30 days of the date of this letter to Mr. Fred Hanshaw of our Project Management Navigation Improvements Special Office at our address above, ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw).

Sincerely,

ORIGINAL SIGNED BY

Denny A Lundberg, P.E.
Chief, Navigation Improvements
Special Office

Attachment



ILLINOIS
DEPARTMENT OF
NATURAL RESOURCES
Office of Water Resources

524 South Second Street, Springfield 62701-1787

George H. Ryan, Governor ● Brent Manning, Director

November 16, 2000

SUBJECT: Dredged Material Placement
Oquawka Reach Dredge Cuts
Mississippi River Miles 411.0-415.2

Mr. Fred Hanshaw
U.S. Army Corps of Engineers
Rock Island District
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

ATTENTION: Planning, Programs, and Project Management Division

Dear Mr. Hanshaw:

Thank you for your November 6, 2000 request for our input concerning the additional site (Site 8) being considered for potential dredged material placement in the Oquawka reach of the Mississippi River.

Like the seven previously proposed sites, this eighth site is behind an existing levee. Provided that the dredged material will not be used to raise the design elevation of the levee, the proposed placement site will be considered to be outside of the river "floodway" and the dredging activities will comply with your Illinois Department of Natural Resources, Office of Water Resources Permit No. 17603.

Thank you for providing us with the opportunity to review the proposal. Please feel free to contact Mike Diedrichsen of my staff at 217/782-3863 if you have any questions or comments.

Sincerely,

Dennis L. Kennedy, P.E.
Senior Water Resources Engineer

DLK:MLD:emm

cc: IDNR/OREP (Robert Schanzle)

(printed on recycled and recyclable paper)



Illinois
Department of
Natural Resources

<http://dnr.state.il.us>

524 South Second Street, Springfield, Illinois 62707-1787

George H. Ryan, Governor • Brent Manning, Director

December 8, 2000

Mr. Denny A. Lundberg
Chief, Navigation Improvements Special Office
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw)

Dear Mr. Lundberg:

Reference is made to your agency's letter of November 6, 2000 concerning the addition of Site 8 to the final alternative for dredged material placement sites for the Oquawka Reach (Oquawka, Furnald Island, and Lock 18 Upper Dredge Cuts), Pool 18, Mississippi River miles 411.0 and 415.2, in Henderson County, Illinois.

We have consulted the Illinois Natural Heritage Database and find no records of threatened/endangered species or natural areas in the vicinity of Site 8. However, we note that the aerial photo appended to your letter shows a drainage ditch in the southeastern portion of the site that appears to support wetland vegetation. We recommend that this area be evaluated for potential wetland values before a decision is made to dispose of dredged material there.

The Department has no additional comments regarding Site 8 at this time. Please contact me at 217-785-4863 if we can be of further assistance.

Sincerely,

Robert W. Schanzle
Permit Program Manager
Office of Realty and Environmental Planning

RWS:rs

cc: IDNR/OWR (Kennedy), IEPA (Yurdin), IDOA (Savko), IADNR (Szcodronski),
USFWS (Clevenstine), USEPA (Pierard)

Printed on recycled and recyclable stock



P.O. Box 260
130 North Main Street
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Fax: (309) 426-2177

John J. Hattery
Roger L. Williamson
S. David Simpson
Thomas G. West
Ronald D. Stombaugh
Carol Masden Simpson
George Hennenfent
Patricia A. Hattery

Of counsel:
Max E. Mathers
William K. Richardson
Timothy E. Sullivan
Robert E. McLaughlin
(1915-1998)
Richard J. Neagle, Jr.
(1931-1991)

April 27, 2001

Karen J. Grizzle
Chief, Acquisition Branch
Department of the Army
Rock Island District, Corps of Engineers
Clock Tower Building
PO Box 2004
Rock Island IL 61204-2004

Dear Ms. Grizzle,

You have sent to Howard Pruett a request to do a cultural and wetlands survey. Mr. Pruett wants to explore with you an option to your proposal. He is very reluctant to allow dredging material to be placed on his property where indicated. The area you have indicated is, in his opinion, some of the most productive farmland that he owns.

He would be interested in exploring with you the possibility of placing the dredging material in a 75 foot wide strip on the land side of the levee that borders his property. This property is less valuable to Mr. Pruett and it would help to fortify the levee in that area. Mr. Pruett has talked with the adjoining landowner and believes that he would consider a similar proposal. That would allow you to place the dredging material all the way from the area of the pump house for Henderson County Drainage District Number 3 to the north boundary line of the District.

As part of the negotiations, Mr. Pruett would like to know the answers to the following questions:

1. When would the dredging take place?
2. How much material would be dredged? What is the yardage?
3. How often would the dredging occur?
4. What is the actual size of the disposal area needed?
5. For instance, if the dredging material was put on Mr. Pruett's farm as proposed, how high would the material be piled?
6. To what extent are the terms and conditions set forth in the "Right-of-Entry for Survey and Exploration" form negotiable?
7. What would be the nature of compensation to Mr. Pruett if his farm land is used as a dredge disposal site by the Corps?

Galesburg office: Suite 402 - Hill Arcade • P.O. Box 1428 • Galesburg, Illinois 61402-1428 • Telephone: (309) 343-6152 • Fax: (309) 343-5103

Monmouth office: Ronald D. Stombaugh • 1025 East Broadway • Monmouth, Illinois 61462 • Telephone: (309) 734-3150 • Fax: (309) 734-7043

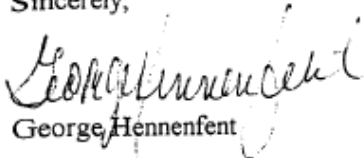
Visit our website at www.batterysimpsonwest.com

Mr. Pruett believes that the placing of the dredging material next to the levee would provide a place for wildlife during periods of flooding. During the flood of 1993, dozens and perhaps hundreds of animals died because the sudden break of the levee cut off their escape to higher ground. The proposal offered by Mr. Pruett would provide an area of high ground in an area highly populated with wildlife.

Please review this and let me know your response.

Thank you.

Sincerely,


George Hennenfent



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

August 17, 2001

Planning, Programs, and
Project Management Division

SEE DISTRIBUTION LIST

The Rock Island District of the U.S. Army Corps of Engineers (Corps) has expanded Site 2 in the final alternative for potential dredged material placement sites for the Oquawka Reach (Oquawka, Furnald Island and Lock 18 Upper Dredge Cuts, Pool 18, Mississippi River Miles 411.0-415.2).

This alternative was formulated subsequent to the combined office and on-site meeting held last fall for the Oquawka Reach Dredge Cuts with the Federal and State Environmental Agencies and subsequent to the addition of Site 8 to the plan. The Corps is re-coordinating with applicable State and Federal agencies to evaluate this alternative in the Dredged Material Management Plan (DMMP), including an Environmental Assessment and a Section 404 Evaluation. The Corps is not re-requesting comments on the original plan if already provided, only on Site 2 Expanded. Any future activities involving modifications to this amended DMMP, including a Section 204 project, would be fully coordinated.

At this time, we would like to identify any existing significant resources or other environmental concerns associated with Site 2 Expanded, such as endangered or threatened species, wetlands, known land-use plans, including Federal or State long-term contract obligations, hazardous toxic & radioactive waste concerns, and floodplain issues, such as potential loss of floodplain storage and potential impedance of flows, etc. Maps of Site 2 Expanded and the proposed DMMP are enclosed to assist your evaluation. Please inform us of any reports, studies, or other research concerning environmental resources in the project vicinity that may be of use in analyzing potential impacts of the project.

Please forward all comments within 30 days of the date of this letter to Mr. Fred Hanshaw of our Project Management Branch at our address above, ATTN: Planning, Programs, and Project Management Division (Fred Hanshaw).

Sincerely,

ORIGINAL SIGNED BY

Frank Monfeli
DMMP Project Manager

Enclosures



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

December 5, 2001

Planning, Programs, and
Project Management Division

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, Illinois 62704

Dear Ms. Haaker:

The Rock Island District of the U.S. Army Corps of Engineers (Corps) is forwarding the draft report entitled Phase I Geoarchaeological Investigation of 108.2 Acres Near Oquawka, Henderson County, Illinois (Enclosure 1). Jim Snyder and Jeff Anderson, with American Resources Group, Ltd., Carbondale, Illinois, prepared the report under Corps Contract DACW25-98-D-0016, Work Order No. 0010 (Cultural Resources Management Report No. 1132).

This work was conducted for the proposed Dredged Material Placement Site 8 and Site 5-Access to Site 8, Oquawka Reach Dredged Material Management Plan, Henderson County, Illinois.

The Corps concurs with the opinion of the authors that archaeological Sites 11HE433 and 434 are not eligible for inclusion in the National Register of Historic Places (NRHP). The Corps also concurs that Site 11HE435 is potentially eligible for the NRHP and requires further testing to determine if the site meets the NRHP criteria of significance.

The Corps intends to avoid Site 11HE435 in developing this dredged material placement site by establishing a 50-foot buffer zone extending out from the site perimeter and avoiding any activity within the site area or its buffer zone. Since the moderately well drained, buried paleosol identified in Figure 4 of the report has produced no cultural material, the Corps finds further investigation of this buried soil is not warranted.

Please provide any comments you may have on this project within 30 days from the date of this letter. If we do not hear from you within this time, we shall proceed with the project as planned.

If you have any questions regarding this matter, please call Mr. Ron Pulcher of our Economic and Environmental Analysis Branch, telephone 309/794-5384, or write to our address above, ATTN: Planning, Programs, and Project Management Division (Ron Pulcher).

Sincerely,

ORIGINAL SIGNED BY

Kenneth A. Barr
Chief, Economic and Environmental
Analysis Branch

Enclosure



**Illinois Historic
Preservation Agency**

1 Old State Capitol Plaza • Springfield, Illinois 62701-1507 • (217) 782-4836 • TTY (217) 524-7128

Henderson County Please refer to: IHPA LOG #0112100011KHE
Oquawka
Oquawka Reach Dredged Material Management Plan
COERI - DACW25-98-D-0016; WO 0010
DMP Site 8 and Site 5-Access to Site 8

December 31, 2001

Mr. Kenneth A. Barr
U.S. Army Corps of Engineers, Rock Island District
Chief, Economic & Environmental Analysis Branch
Clock Tower Building/P.O. Box 2004
Rock Island, IL 61204-2004

Dear Sir:

Re: Phase I Geoarchaeological Investigation of 108.2 Acres Near Oquawka, Henderson County,
Illinois (DRAFT, November 2001). Cultural Resources Management Report No. 1132.
American Resources Group. Acres: 108.20; Sites: 3

Thank you for requesting comments from our office concerning the possible effects of the project referenced above on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

Our staff has reviewed the archaeological Phase I reconnaissance and geoarchaeological investigation report prepared for this project. The Phase I survey, geoarchaeological investigation, and assessment of the archaeological resources appear to be adequate. We concur that archaeological sites 11HE433 and 11HE434 are not eligible for the National Register of Historic Places. No further archaeological investigation is necessary at the locations of these sites. No further investigation is necessary for the buried paleosol.

We also concur that archaeological site 11HE435 is potentially significant and, consequently, may be eligible for listing on the National Register of Historic Places under Criterion "D". The avoidance plan for 11HE435, as described in the documentation you submitted, is adequate to avoid effects to this potentially eligible site. Implementation of the plan will evidence compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

We look forward to receiving two copies of the final report for our files. If you have any questions, please contact Frances R. Knight at 217/782-9345.

Sincerely,

Anne E. Haaker
Deputy State Historic
Preservation Officer

AEH:FRK

cc: Mr. Ron Pulcher, COERI/
Mr. Michael J. McNerney, ARG



DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

May 22, 2001

Real Estate Division

Subject: Oquawka Dredged Material Management Project, Henderson
County, Illinois

Hattery, Simpson, & West, Attorneys
ATTN: Mr. George Hennenfent
Post Office Box 260
130 North Main Street
Roseville, Illinois 61473-0260

Dear Mr. Hennenfent:

The Corps of Engineers has reviewed your letter, April 27, 2001, which addresses Mr. Howard Pruett's concerns regarding the subject dredged material management project.

We understand Mr. Pruett's concerns, and are willing to explore those options that are environmentally feasible and cost effective.

In response to Mr. Pruett's specific questions, the proposed dredging activity could take place any time between May and November, but it generally is between Mid-August and Mid-October. It is currently estimated that approximately 484,000 cubic yards of dredge material would be removed over the 40-year project life. The actual frequency of dredging would be determined by channel conditions; if the entire reach is considered, dredging frequency is estimated at once every three years at a maximum. While the Corps of Engineers is currently assessing an area that is 2050' X 2200', we anticipate needing only one-third of this area for the actual placement of the dredged material. The Right-of-Entry allows us to review the entire site so that we can identify whether there is a final site suitable for placement of dredged material and avoiding wetland areas or any cultural site that may be found. The actual placement of dredged material would average 10 feet high.

Most of the terms and conditions set forth in the "Right of Entry for Survey and Exploration" are not negotiable. However, we would consider additions or revisions to the terms and conditions if acceptable by our attorneys.

If it is determined that Mr. Pruett's land can be used as a dredged material placement site, Mr. Pruett would be compensated for the real estate interest acquired by the Government. Compensation would be based on an appraisal of the fair market value of the land considering its highest and best use.

If you have any additional questions or concerns, please contact Mrs. Debi VanOpdorp, of my staff at (309) 794-5292.

Sincerely,

ORIGINAL SIGNATURE

Patricia M. Dice
Chief, Real Estate Division

United States Department of Agriculture



Natural Resources Conservation Service
1000 N Roosevelt Ave, Suite 8
Burlington, IA 52601
319-753-6221

January 29, 2002

Mr. Randy Kracian
District Engineer
U.S. Army Engineer District, Rock Island
Clock Tower Building
P.O. Box 2004
Rock Island, IL 61204-2004

Dear Mr. Kracian:

There has been a preliminary wetland determination completed as you requested on the property of Steve Stoller in section 21 East of Huron Township. The field that you requested a determination on has been changed to two different fields as identified on the map. Field 3A is enrolled in the Conservation Reserve Program (CRP).

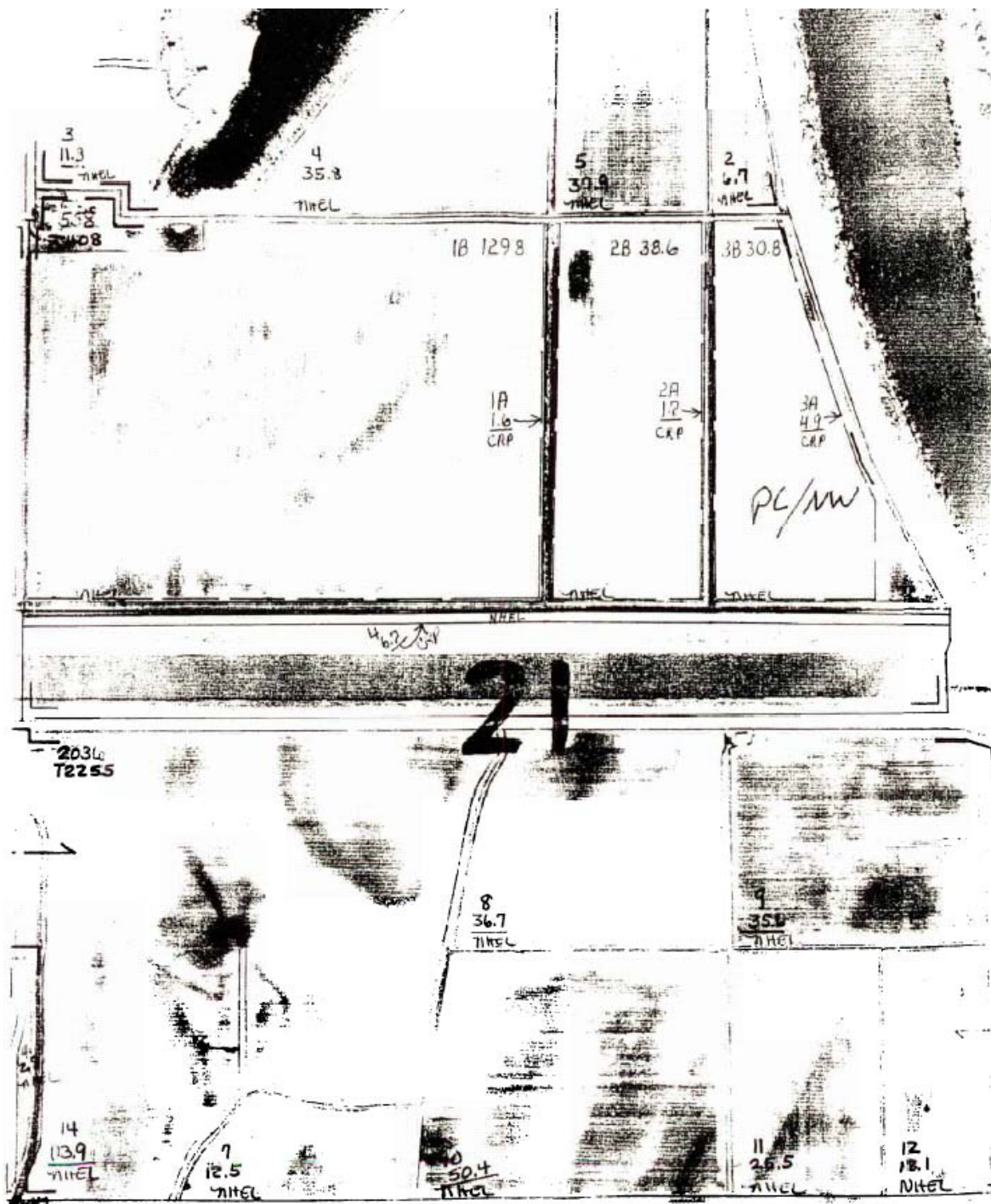
Based on our investigation, the area is identified as a Prior Converted Cropland (PC). This preliminary determination is for the U.S. Army Corp of Engineers only. The landowner has not requested a wetland determination for Food Security Act purposes. NRCS certified wetland determinations are for Food Security Act purposes only. We always tell landowners to contact the U.S. Army Corp of Engineers and Iowa Department of Natural Resources for information about their wetland regulatory programs.

If you have any questions, please contact this office.

Sincerely,

A handwritten signature in dark ink, appearing to read "Terrance O. Rudolph", is written over a light gray rectangular background.

Terrance O. Rudolph
District Conservationist



NOT TO SCALE (1990 FLIGHT) DES MOINES COUNTY - CROP YEAR



IN REPLY REFER
TO:

FWS/RIFO

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Rock Island Field Office

4469 48th Avenue Court

Rock Island, Illinois 61201

Phone: (309) 793-5800 Fax: (309) 793-5804



February 14, 2002

U.S. Army Corps of Engineers, Rock Island District
ATTN: PM-A (Gail Clingerman)
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Ms. Clingerman:

This letter is in response to distribution of information for the Oquawka Reach Dredged Material Management Plan (DMMP). Per your request, we have reviewed available information and have enclosed a map with recent inventory information for the project area.

We have been advised that since distribution of the original coordination material dated September 12, 2000, sites 1, 4, 6, and 7 have been removed from further analysis. Site 2 has been expanded, as described in the August 17, 2001 coordination letter, and site 8 has been added, as described in the November 6, 2000 coordination letter. We also understand that wetlands have been identified within sites 2 expanded, 3, and 8, and that compensatory mitigation will be conducted by the Corps in order to replace wetland functions and values lost as a result of dredged material placement at these sites.

In order to facilitate your compliance with the National Environmental Policy Act and the Endangered Species Act, we are providing the following information about federally proposed or listed threatened and endangered species which may occur in the project areas. The threatened bald eagle (*Haliaeetus leucocephalus*) is currently listed as wintering and breeding in Des Moines County, Iowa and is listed as wintering in Henderson County, Illinois. During the winter, this species feeds on fish in the open water areas created by dam tailwaters, the warm water effluent of power plants and municipal and industrial discharges, or in power plant cooling ponds. The more severe the winter, the greater the ice coverage and the more concentrated the eagles become. They roost at night in groups in large trees adjacent to the river in areas that are protected from the harsh winter elements. They perch in large shoreline trees to rest or feed on fish. There is no critical habitat designated for this species. The eagle may not be harassed, harmed, or disturbed when present, nor may nest trees be cleared.

The Higgins' eye pearly mussel (*Lampsilis higginsii*) is listed as endangered for Des Moines County, Iowa and Henderson County, Illinois. This species prefers sand/gravel substrates with a swift current and is most often found in the main channel border or an open, flowing side channel. Sites 2 expanded, 3, and 8 are inland placement sites and are not likely to adversely affect mussel resources in the project area. Site 5 borders the main channel, although Corps of Engineers and Illinois DNR staff conducted a mussel survey at the main channel border of Site 5 on September 24, 2001 and did not locate any Higgins' eye pearly mussels or suitable habitat for the species.

The endangered Indiana bat (*Myotis sodalis*) is listed as occurring in both in Des Moines County, Iowa and Henderson County, Illinois. While this bat may forage along forested fringes and within nearby forested areas, it is unlikely that the proposed project will negatively impact foraging behavior, and critical refugia (caves and roost trees) are also not likely to be affected by the actions as proposed.

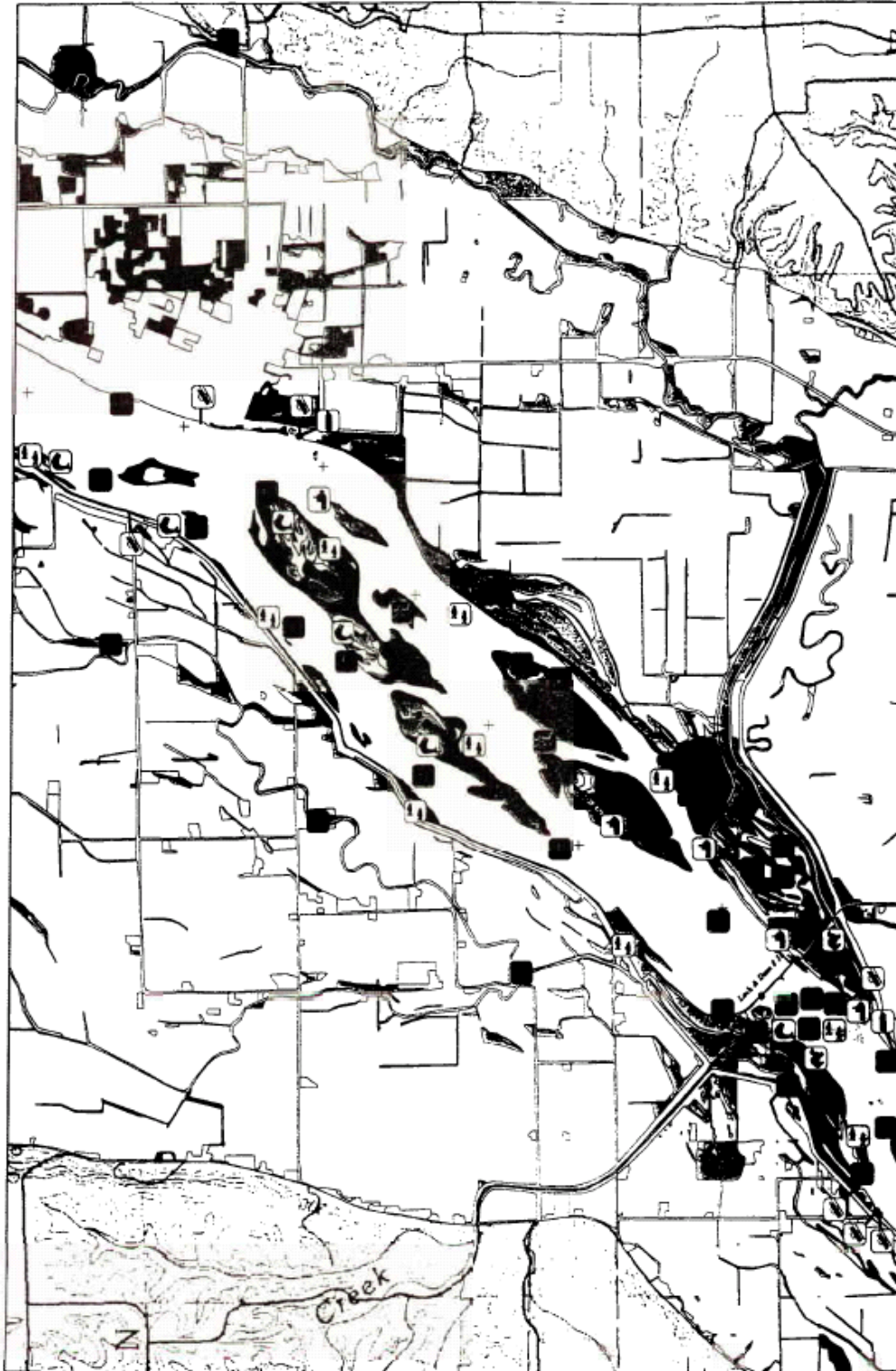
This letter provides comment under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (ESA), as amended. We would like to participate in the review of the compensatory mitigation plan for unavoidable wetland impacts at Sites 2 expanded, 3, and 8. Questions regarding this letter or our availability for review of the compensatory mitigation plan may be directed to Mr. Bob Clevensine at the above telephone number, ext. 521.

Sincerely,


for Richard C. Nelson
Supervisor

Enclosures

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TILE 68

Scale 1:36,000



Mark Cornish
USACOE
PO. Box 2004
Planning Division
Rock Island IL 61204-2004

Mike Griffin
IA DNR
206 Rose St.
Bellevue IA 52031

05/23/2002

Mark;

This letter provides comments on the addition of site 8 to the Oquawka Reach DMMP. Field biologist for the Iowa DNR have no objections from placing dredged material out of the floodway for beneficial use by nearby drainage districts or placement out of the floodway for disposal. As you know a wetland determination will be needed and if wetlands are found an appropriate mitigations plan will be needed.

Thank you for the opportunity to comment.

Sincerely;

Mike Griffin
Mississippi River Wildlife Biologist

EA APPENDIX B

CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION

CEMVR-PM-A

**CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION**

**DREDGED MATERIAL PLACEMENT SITE FOR OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0-415.2**

AUGUST 2002

**DREDGED MATERIAL PLACEMENT SITE FOR OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0-415.2**

**EA APPENDIX B
CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION**

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**DREDGED MATERIAL PLACEMENT SITE FOR OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0-415.2**

**CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION**

SECTION 1 - PROJECT DESCRIPTION

LOCATION

There are three proposed dredged material placement sites. Site 3 is located on the right descending side of the Upper Mississippi River at RM 412.1-413.6, with the approximate center of the site at UTM, Zone 15, 4,530,620 meters N; 667,670 meters E. Site 5 is located on the left descending side of the Upper Mississippi River at RM 414.3-414.4, with the approximate center of the site at UTM, Zone 15, 4,531,250 meters N; 671,000 meters E. Site 8 is located on the left descending bank of the Upper Mississippi River at RM 414, with the approximate center of the site at UTM, Zone 15, 4,531,100 N; 671,290 E.

GENERAL DESCRIPTION

The proposed work involves both hydraulic and mechanical dredging and placement of dredged material from three chronic dredge cuts into three new terrestrial areas. These three new sites—Site 3, Site 5, and Site 8—are addressed in the EA (Environmental Assessment) and only Site 3 and the access area between Sites 5 and 8 are addressed in this Clean Water Act Section 404 (b)(1) Evaluation.

The availability of operationally feasible, environmentally acceptable, and economically sound dredged material placement sites at locations requiring chronic dredging presents a constant challenge to those Federal and State agencies charged with managing the UMR (Upper Mississippi River). Historic sites for this dredging area have become less environmentally acceptable at the quantities and frequencies that have occurred in the past. (See Background Information section in the EA.)

AUTHORITY AND PURPOSE

The authority and purpose of the evaluation portion of this document is to comply with Section 404 of the Clean Water Act pertaining to guidelines for placement of dredged or fill material into the waters of the United States. This evaluation, in conjunction with the EA, will assist in analysis of the alternatives for this project, resulting in the base plan (Federal Standard). Further, this evaluation will provide information and data to the State water quality certifying agency demonstrating compliance with State water quality standards. This will aid in the decision-making process concerning State 401 water quality certification.

GENERAL DESCRIPTION OF DREDGED MATERIAL

Sampling of the dredged sediments for this chronic dredge cut was undertaken on July 28, 1999. Complete detailed results can be found on Table EA-4 of the Environmental Assessment. The amount of fines in the sediment is very low. The percent of material passing the No. 200 sieve in all samples ranged from 0.1% to 0.2% and averaged 0.16%.

Laboratory testing was performed in accordance with EM 1110-2-1906, dated November 30, 1970, revised May 1, 1980, and August 20, 1986. All samples were oven dried at 110 degrees centigrade, and then shaken through a nest of sieves ranging in size from 3.81 cm (1.5 in) to #200.

Visual classification is in accordance with the USCS (Unified Soils Classification System).

DESCRIPTION OF THE PROPOSED PLACEMENT SITES

Complete and detailed information on the placement sites can be found in the EA (see Section II. Project Location and Description; and Section V. Environmental Impacts of the Preferred Alternative).

DESCRIPTION OF PLACEMENT METHOD

Dredged material would be placed at Sites 3 and 8 by both hydraulic and mechanical means and at Site 5 by mechanical means only.

A hydraulic dredge utilizes a cutterhead in combination with a centrifugal pump to entrain dredged solid materials in high velocity water to excavate dredged material. Dredged material is then pumped in slurry via floating discharge lines and onto the placement areas through moveable shorepipe. Shorepipe is positioned by use of a bulldozer and pipe handlers to the desired placement site locations.

Mechanical dredged material placement requires at a minimum: one crane barge or backhoe, one tender boat, two material barges, and one end loader/bulldozer. A crane barge mechanically excavates the sediment from the dredge cut and places it on the material barges. The tender boat moves the filled material barges to the off-loading site. The dredged material is off-loaded by a crane barge, backhoe, or end loader, and the bulldozer moves the material onto the placement site.

The access area between Sites 5 and 8 would be filled using a bulldozer to move material from the slope onto the lower channel/wetland to create a flat surface for equipment access. A culvert would be installed underneath the fill material to maintain the hydrological connection between the wetlands on either side of the access area.

SECTION 2 - FACTUAL DETERMINATIONS

PHYSICAL SUBSTRATE DETERMINATIONS

A. Substrate Elevation and Slope. Flat pool for the UMR in Pool 18 is 528.0 feet MSL (Mean Sea Level of 1912). The average elevation at Site 3 is approximately 530 feet MSL. Site 5 elevations range from approximately 539 feet MSL to approximately 526 feet MSL. The elevations at Site 8 range from approximately 527 feet MSL to 530 feet MSL. Although the placement sites are all at or near the flat pool elevation of the Mississippi River, levees separate the river from each of the sites.

B. Sediment Type. Site 3 consists of Zook silty clay loam and Dolbee silt loam. The Henderson County Soil Survey shows Site 5 as being a swamp and having no associated soil type, and Site 8 as including Sawmill silty clay loam, Thorp silt loam, Littleton silt loam, and swamp. The dredged sediments have been described in the Environmental Assessment in Section II, Project Location and Description and in Table EA-2, Grain Size Analysis.

C. Dredged/Fill Material Movement. Return water from hydraulic dredging at Sites 3 and 8 would flow through existing levee district drainage ditches to their respective pump stations and would be pumped out into the river at those locations. Site 5 would have mechanical dredged material placement and the material is expected to stay on-site. The material moved into the low wetland/channel area to create an access area between Sites 5 and 8 would be used by heavy equipment to access Site 8, and this equipment is expected to compact the material so that it would not migrate off-site. No movement of the dredged material is anticipated from any of the placement sites.

D. Physical Effects on Benthos. No significant impacts are anticipated to benthic organisms from using Sites 3, 5, and 8, and the access area between Sites 5 and 8.

E. Actions Taken to Minimize Impacts. Dredging quantities would be kept to those necessary to maintain safe navigation.

WATER CIRCULATION AND FLUCTUATION

A. Water. The proposed action would have a temporary and insignificant effect on water quality in the UMR. Water chemistry, water temperature, pH, clarity, color, odor, taste, dissolved gas levels, nutrient levels or organic matter influxes would either be nonexistent or would cause insignificant and temporary impacts to aquatic organisms. Aquatic vegetation is absent in the project area and would not be affected. Impacts to the human population concerning the suitability of this water body for human consumption, recreation, and aesthetics would be negligible or nonexistent.

B. Current Patterns and Water Circulation. The proposed action would have very little effect on water current patterns and circulation. Minimal changes in current pattern would occur at floodplain Sites 5 and 8 during flood events. A culvert would be installed at the access area between Sites 5 and 8 to allow normal water flow between the wetlands on either side of the access area. During flood events, some water may back up northeast of the access area, but this water would then enter existing drainage ditches to the southeast of the access area and move toward the existing pump station.

C. Normal Water Level Fluctuation. Minimal impacts would occur with regard to prolonged periods of inundation, exaggerated extremes of high or low water, or other water level modifications as a result of this action. A HEC-RAS (Hydrologic Engineering Center-River Analysis System) model indicates that the impact of placement sites 5 and 8 on the Mississippi River floodplain would be negligible.

D. Actions Taken to Minimize Impacts. Dredging quantities would be kept to those necessary to maintain safe navigation. Terrestrial placement into areas already disturbed through agricultural use and levee construction and maintenance is intended to minimize ecological impacts.

SUSPENDED PARTICULATE/TURBIDITY DETERMINATIONS

A. Effects on Physical and Chemical Properties of the Water Column. Impacts on turbidity levels, suspended particulate levels, light penetration, dissolved oxygen, toxic metals, organic influxes, pathogens, and aesthetics would be minor and insignificant because of the terrestrial placement of dredged material.

B. Effects on Biota. Impacts to the aquatic biota would be negligible and insignificant due to the terrestrial placement of dredged materials.

C. Actions Taken to Minimize Impacts. Dredging quantities would be kept to those necessary to maintain safe navigation. Terrestrial placement of the dredged sediments would minimize impacts to the aquatic environment.

CONTAMINANT DETERMINATIONS

Grain size analysis of material from the bed material of these dredge cuts has been classified as SP, Medium to Fine Sand (see Table EA-2 of the Environmental Assessment). Because this dredged material is greater than 80% sand/gravel, further testing is not required since contaminants have a greater affinity for smaller-sized particles. Dredged material is likely to be free from chemical, biological, or other pollutants when it is composed primarily of sand, gravel, or other naturally occurring inert materials, as it is here. An elutriate test would have been performed to determine if contaminants were present if the material was greater than 20% silt/clay. Unless there is some other reason to believe this material may be contaminated, it is unlikely that testing other than a grain size analysis would be performed.

This dredged material meets the exclusion from testing/evaluation criteria as explained in the CWA 404(b)(1) Guidelines and the Inland Testing Manual. Existing information for this project provides a sufficient basis for making factual determinations concerning impacts to waters of the United States.

AQUATIC ECOSYSTEM AND ORGANISMIC DETERMINATIONS

A. Effects on Plankton and Nekton. No significant impacts are anticipated. During hydraulic dredging, the extended flushing action from return water may impact planktonic organisms by washing them down river. These aquatic organisms are regularly exposed to flushing

action from water level fluctuations. Affected areas would recolonize quickly from drifting planktonic organisms from upstream locations after placement ceases. Free-swimming organisms would avoid the area during dredging and placement activities.

B. Effects on Benthos. No impact on benthos should result from placement of material at Sites 3, 5, and 8, and the access area between Sites 5 and 8.

C. Effects on Aquatic Food Web. Given the low contamination levels associated with sandy dredged material, no significant impacts are anticipated to any life stage of aquatic or terrestrial organism. The proposed action would not cause or establish the proliferation of any undesirable competitive species that may usurp resident species. If any such proliferation should occur, it should not be caused solely by the proposed action. No significant reduction or elimination of any food chain organism would occur if the proposed sites were utilized.

D. Effects on Special Aquatic Sites. Approximately 1.1 acres of wetlands would be impacted at Site 3 and the access area between Sites 5 and 8. These wetlands provide minor wildlife habitat functions for small animals, such as amphibians, songbirds, and small mammals. These wetlands are small and isolated from a larger aquatic ecosystem by levees and agricultural land, and the compensatory mitigation of 1.1 acres would compensate for the loss of these wetlands. This compensatory mitigation would occur within an existing agricultural area at RM 422R through the cessation of farming and the plugging of drainage tiles. There are no refuges, mudflats, vegetated shallows, or riffle and pool complexes in the project area.

E. Threatened and Endangered Species. (See EA Section V. Environmental Impacts of the Preferred Alternative, C. Natural Resources, Endangered Species.)

F. Other Wildlife. Other wildlife normally present would temporarily avoid the project area during the dredging operation. The dredged material placement Sites 5 and 8 may provide high ground for small mammals and reptiles when most of the floodplain areas are inundated. Placement of dredged material onto agricultural land may reduce the availability of food for some wildlife, but the presence of crop fields in the vicinity minimizes the effect of the loss.

G. Actions Taken to Minimize Impacts. Dredging quantities would be kept to those necessary to maintain safe navigation. Terrestrial placement would avoid impacts to the aquatic ecosystem. The wetlands near Site 8 have been completely avoided in the final preferred alternative.

PROPOSED PLACEMENT SITE DETERMINATIONS

A. Mixing Zone Determinations. A mixing zone is that volume of water at a placement site or discharge site required to dilute contaminant concentrations associated with a discharge of dredged material to an acceptable level. Since terrestrial placement is involved, no violation of any standard would result during placement of dredged material.

B. Determination of Compliance with Applicable Water Quality Standards. Section 401 water quality certification would be obtained from the States of Iowa and Illinois prior to implementation.

C. Potential Effects on Human-Use Characteristics. Implementation of the preferred alternative for this project would have no significant effect on municipal or private water supplies;

recreational or commercial fisheries; parks; national monuments; or other similar preserves. There would be temporary disruption to water-related recreation and commercial fisheries in the immediate area of the project while the dredge is placing material on the sites.

DETERMINATION OF CUMULATIVE EFFECTS ON THE AQUATIC ECOSYSTEM

Utilization of the proposed levee placement and agricultural field sites would cause only a minor impact to any component of the aquatic ecosystem. Detailed information on cumulative effects can be found in the EA (see Section V. Environmental Impacts of the Preferred Alternative, C. Natural Resources, Cumulative Impacts).

No significant indirect and cumulative impacts are expected from terrestrial placement of dredged material at Sites 3, 5, and 8.

Placement of dredged material at Sites 3, 5, and 8 should not decrease overall aquatic productivity of the project area or downstream.

DETERMINATION OF SECONDARY EFFECTS ON THE AQUATIC ECOSYSTEM

Placing the dredged material on inland sites eliminates impacts to more environmentally productive areas, such as main channel borders and backwaters. Compensatory wetland mitigation would be provided for the 1.1 acres of wetland impacts at Site 3 and the access area between Sites 5 and 8. No other secondary effects to the aquatic ecosystem are anticipated. This determination is subject to reevaluation if warranted by Federal, State, or local agency comment, as well as from the interested public.

**DREDGED MATERIAL PLACEMENT SITE FOR OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0-415.2**

**CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION**

**SECTION 3 - FINDINGS OF COMPLIANCE OR NONCOMPLIANCE
WITH THE RESTRICTIONS ON PLACEMENT**

1. No significant adaptations of the 404(b)(1) Guidelines were made relative to this evaluation.

2. Alternatives that were considered in addition to the proposed action were as follows:

No Project	Bankline Placement
No Change	Upland Placement
Floodplain Forest Placement	Thalweg Placement

3. Certification under Section 401 of the Clean Water Act would be obtained from Iowa and Illinois prior to implementation.

4. The project would not introduce hazardous or toxic substances into the waters of the United States or result in appreciable increases in existing levels of toxic materials.

5. No significant impact to state or federally listed threatened or endangered species is anticipated from this project.

6. No municipal or private water supplies would be affected. There would be no adverse impacts to recreational or commercial fishing. No significant adverse changes to the ecology of the river system would result from this action.

7. No contamination of the river is anticipated. The proposed actions would cause only minimal adverse environmental effects when performed separately, and would have only minimal cumulative adverse effects on the environment.

8. No other practicable alternatives have been identified. The proposed actions are in compliance with Section 404(b)(1) of the Clean Water Act, as amended. The proposed actions would not significantly impact water quality and would improve the integrity of an authorized navigation system.

9. Approximately 1.1 acres of wetlands will be restored to offset the unavoidable loss of 1.1 acres of wetlands and associated functions and values resulting from the proposed actions.

Date

William J. Bayles
Colonel, U.S. Army
District Engineer

EA APPENDIX C

COMPENSATORY MITIGATION PLAN

**ENVIRONMENTAL ASSESSMENT FOR THE OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0 – 415.2**

**EA APPENDIX C
COMPENSATORY MITIGATION PLAN**

BACKGROUND

The mitigation plan proposed for this project was developed through an interagency planning team comprised of representatives from the District (U.S. Army Corps of Engineers, Rock Island District), the U.S. Fish and Wildlife Service, and other State and Federal natural resource and regulatory agencies. It follows the District's *Guidance for Section 404 Mitigation for Operations and Maintenance Activities*, which is on file at the Rock Island District. This Guidance is based on applicable environmental and planning regulations, legislative acts, executive orders, and agreements.

The Oquawka Reach DMMP (dredged material management plan) includes the Lock 18 Upper, Furnal Island, and Oquawka Dredge Cuts. Dredged material from these dredge cuts would be placed at Placement Sites 3, 5, and 8, as described in the main text of this Environmental Assessment. Approximately 1.1 acres of wetlands would be impacted at Site 3 and the access area between Sites 5 and 8.

The District proposes to create approximately 1.1 acres of wetlands within an existing farm field in order to replace the wetland functions and values lost as a result of implementation of the Oquawka DMMP (see plate EA-C-1). The Natural Resources Conservation Service made a preliminary determination in January 2002 that the mitigation site is a prior converted non-wetland area. The 1.1-acre area is surrounded by wetter areas of the field dominated by hydrophytic species and hydric soils. The 1.1-acre area is dominated by upland plant species and has a 6- to 12-inch sandy loam layer over the silty clay loam soils found to the surface in the wetter portions of the field. This sandy loam layer will be excavated to replicate the wetter conditions located adjacent to the site. The proposed mitigation site is located behind the Iowa River-Flint Creek Levee in Des Moines County, Iowa, at RM 422 and just north of the Hawkeye Dolbee Diversion Ditch. It is in Section 21, Township 72N, Range 1W.

If this proposed compensatory mitigation plan is found to be unworkable for any reason prior to implementation, the District would coordinate with the State and Federal natural resources and regulatory agencies in order to establish an alternative mitigation plan in a timely manner.

GOALS/OBJECTIVES

The goal of this mitigation plan is to:

- Replace the wetland functions and values lost as a result of impacts to 1.1 acres of wetlands at Site 3 and the access area between Sites 5 and 8. These wetland functions and values include:
 - Sediment and toxicant retention
 - Nutrient removal/retention/transformation
 - Wildlife habitat for small birds, mammals, and amphibians

That goal will be met through the following objectives, to be measured approximately 2 years after cessation of farming practices at the 1.1-acre mitigation site:

- The successful excavation of 6 to 12 inches of sandy loam soils
- The establishment of a diverse, native, wetland plant community
- The establishment of wetland hydrology
- Less than 10% coverage of Reed Canary Grass (*Phalaris arundinacea*)

WETLAND IMPACTS

Approximately 1.0 acre of wet meadow/scrub-shrub wetlands would be impacted at Site 3, and approximately 0.1 acre of forested wetlands would be impacted to create an access area between Sites 5 and 8. The wetland delineation report for Site 3 lists three wetland functions and values present at Site 3. The sediment and toxicant retention function is present in the wetlands at Site 3 due to the capacity of the wetlands to catch and hold the sediments eroding from the existing levee adjacent to Site 3 and their ability to trap pesticide runoff from the adjacent agricultural fields during rain events. The nutrient removal/retention/transformation function is present in the wetlands at Site 3 through the ability of the diverse vegetation and the microbiology of the wetland soils to trap and process excess nutrients from fertilizer applied to the adjacent agricultural fields that run off the fields and enter the wetlands. The wetlands have low opportunity to perform this function, however, due to the relatively flat nature of the fields and wetlands and the presence of a ditch at the other side of the fields where much of the runoff most likely ends up. The wildlife habitat function is present due to the ability of small birds, mammals, and amphibians to occasionally use the scattered patches of ponded water as a source of drinking water and to utilize the diverse vegetation as a food source and potential nesting area. The access area between Sites 5 and 8 has a wildlife habitat function due to its diverse vegetation and potential source of food and cover for a variety of wildlife.

AVOIDANCE

Avoidance requires that no discharge of dredged or fill material be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. Approximately 6 acres of wetlands is located within Site 2 Expanded, which was considered as a placement site. That site has been removed from this plan in order to avoid those wetland impacts.

MINIMIZATION

Minimization requires that projects be designed, to the extent practicable, to minimize unavoidable adverse impacts to the aquatic ecosystem by limiting the degree or magnitude of the action and its implementation. The current plan minimizes wetland impacts at Site 3, which has unavoidable wetland impacts, by using mechanical placement in the upper portion of the site to avoid potential impacts to the wetlands in that area from sediment in return water associated with hydraulic dredging. In addition, approximately 16 acres of wetlands are located within the original limits of Site 8. These wetland impacts would be minimized in the current plan, which includes impacts to approximately 0.1 acre of wetlands to create an access area between the Mississippi River and Site 8.

Avoidance and Minimization as addressed in the previous sections conform to conditions found in Section 230.10 of the Section 404(b)(1) Guidelines and Rock Island District, Corps of Engineers *Guidance for Section 404 Mitigation for Operations and Maintenance Activities*. For additional information on the placement sites considered and the decision factors involved in avoiding and minimizing wetland impacts, please refer to Table EA-4, EA Section III. Alternatives, EA Section VII. Probable Adverse Environmental Impacts that Cannot Be Avoided, and the 404(b)(1) Evaluation, Section 2 - Factual Determinations.

COMPENSATORY MITIGATION

a. PLAN - A 1.1-acre area is proposed for this plan. The purpose of compensatory mitigation is to replace the wetland functions and values to be lost as a result of wetland fills associated with the proposed project. The wetland functions and values listed in the Goals/Objectives section of this mitigation plan would be created at the proposed compensatory mitigation site. The site is currently a farm field that has been identified by the Natural Resources Conservation Service as prior converted cropland. Farming would cease within the mitigation site, 1.1 acres of sandy loam would be excavated within the top 6 to 12 inches of the site, and wetland vegetation would become established from the existing seed bank.

The 1.1-acre mitigation site is located within an approximately 36-acre farm field. The western boundary of the field is a drainage ditch, and a drainage tile outlet was located within this drainage ditch during a May 6, 2002, site visit by District personnel. The western half of the farm field appears to be better drained than the eastern portion, which includes the 1.1-acre mitigation site. This may indicate that the existing drainage tiles are better functioning in the western portion of the field than in the areas adjacent to the mitigation site, or that the drainage tiles do not extend that far east. Any drainage tiles found to be functioning within the mitigation site would be broken as part of this mitigation plan, but it does not appear that any functioning drainage tiles are currently present within the mitigation site.

The soils in the 16.1-acre field site are Zook and Titus silty clay loams with 0% to 2% slopes and with sand inclusions. District personnel verified the presence of these soils during the May 6, 2002, site visit. The sand inclusions were found to be present in areas dominated by upland plant species such as wild strawberry (*Fragaria virginiana*), dandelion (*Taraxacum officinale*), and sweet clover (*Melilotus* sp.), and in these areas a layer of sandy loam was primarily found in the top 6 to 12 inches of the soil column. Silty clay loam soils were found below the sandy loam. Much of the area outside of these sand inclusions was dominated by hydrophytic plant species such as various sedges (*Carex* sp.), spike rushes (*Eleocharis* sp.), pale dock (*Rumex altissimus*), smartweed (*Polygonum* sp.), and cottonwood (*Populus deltoides*) seedlings.

Implementation of the mitigation plan would include the purchase of the 1.1-acre mitigation site and the cessation of all farming activities within that area. It is expected that the existing seed bank will cause the site to become revegetated with species that will allow for a transition from an herbaceous to a scrub-shrub to a floodplain forest community. The 1.1-acre mitigation site would become wetland as defined by the 1987 Corps of Engineers Wetland Delineation Manual. Management of the 1.1-acre mitigation site would be turned over to the Iowa DNR.

b. SCHEDULE - The goal of the mitigation plan is to acquire the mitigation site prior to wetland alteration. The private landowner has indicated a willingness to work with the District toward acquiring and developing the mitigation site. The District anticipates acquiring and initiating site preparation for dredged material placement at Site 8 and Site 3 during the 2004 dredging season.

c. MONITORING/MAINTANCE - Approximately 1.1 acres of existing farm field is proposed to be converted to wetland as compensatory mitigation for the Oquawka DMMP, and that area will be monitored for the first 2 or more years after cessation of farming in accordance with this mitigation plan. If the vegetative community that becomes established within 2 years of cessation of farming does not meet the goals and objectives as stated above, the District would reevaluate the mitigation site and perform remedial actions as necessary to achieve those goals and objectives. Remedial actions may include chemical and/or mechanical control of invasive species, planting and/or seeding of wetland trees, shrubs, or herbaceous vegetation, and excavation to reach the water table at the site. Once the goals and objectives are achieved, the area would be turned over to the Iowa DNR for ongoing maintenance and management.

EA APPENDIX D

DISTRIBUTION LIST

**DREDGED MATERIAL PLACEMENT SITE FOR OQUAWKA REACH:
LOCK 18 UPPER, FURNAL ISLAND, AND OQUAWKA DREDGE CUTS
UPPER MISSISSIPPI RIVER MILES 411.0-415.2**

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